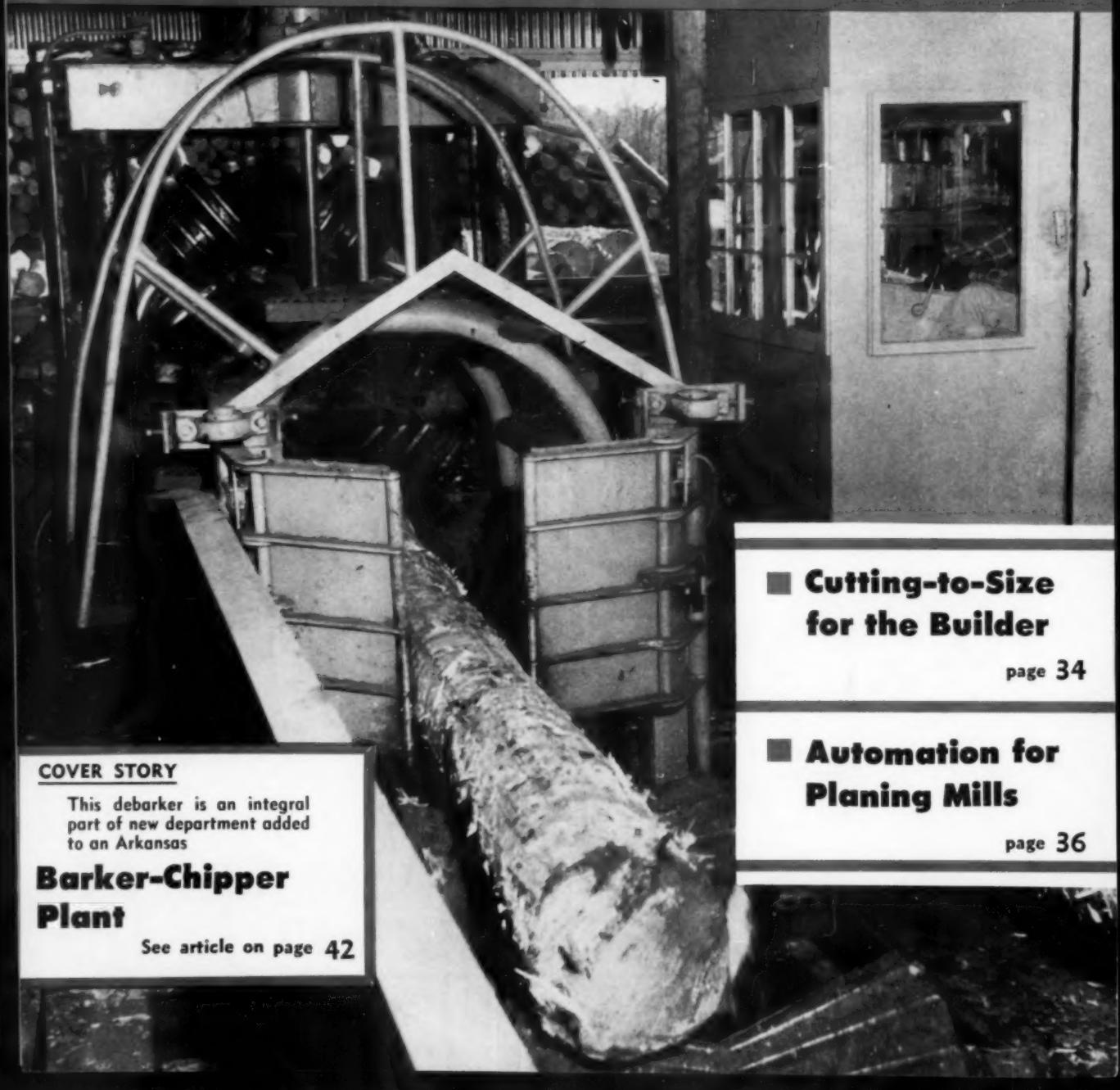
AUGUST, 1958

THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING



■ **Cutting-to-Size for the Builder**

page 34

■ **Automation for Planing Mills**

page 36

COVER STORY

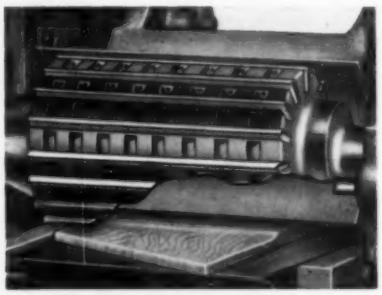
This debarker is an integral part of new department added to an Arkansas

Barker-Chipper Plant

See article on page 42

Serving the Industry Since 1852

The NEW SLANT on LUMBER FINISHING...



ANOTHER EXCLUSIVE FEATURE

Note how sniped ends are eliminated by mounting Top Cutterhead Unit diagonally to the Main Guide, presenting a sheer cut to stock under Top Cylinder. It also gives a smoother finish around knots and cross grain. Less power is needed to feed stock.

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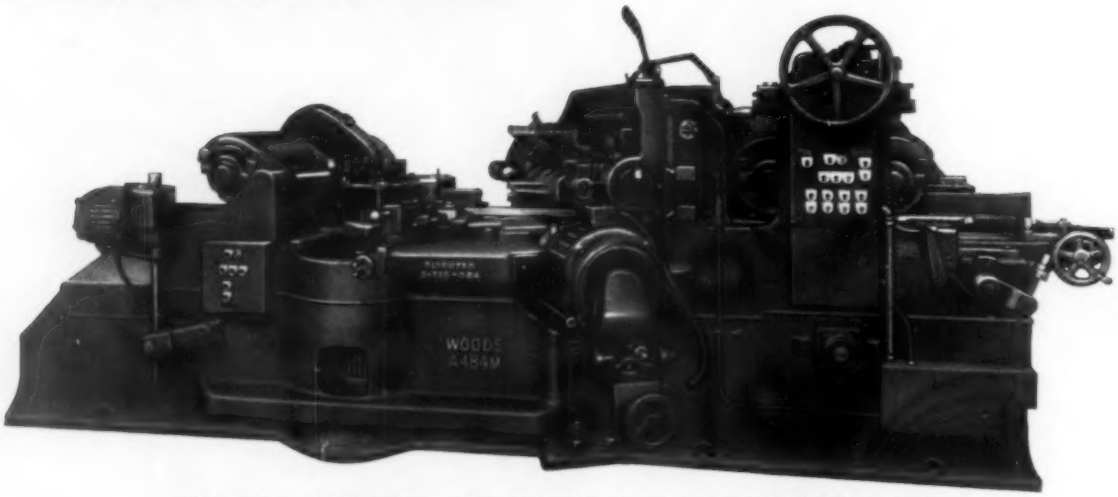

Upgrading of all stock, with astonishing improvement in finish on the lower grades now made possible with this revolutionary DIAGONAL PLANER and MATCHER.

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S. A. WOODS MACHINE CO.

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Master of many jobs for Winslow Timber Co.

With lift fork, the No. 977 carries logs from deck to pond.

The No. 977's lift fork is also used to load trailer wheels.

With bucket, the No. 977 cleans up bark around the sawmill.

For handling a lot of different jobs efficiently, there's no machine more productive than a Caterpillar Diesel Traxcavator* with quick-change attachments. An all-purpose tool around a mill, it can be kept working all the time carrying logs, loading, cleaning up and many other jobs. Here you see three of a number of chores that this No. 977 does for the Winslow Timber Co., Winslow, Arizona. The mill saws an average of 150,000 bd. ft. a day. Says Manager Yale Weinstein: "We handle from 12-foot to 40-foot logs with our No. 977. It can handle all that our mill will saw and do the job easily. We can travel backward as fast as we can forward with it. We like its long tracks and balance. We also get excellent service from our Caterpillar Dealer."

This No. 977 works 12 hours a day, 5 days a week, all year around with a minimum of down time. Such dependable performance is typical of Caterpillar-built Traxcavators. They're ruggedly engineered for the *hard* work, with frames of heavy steel, lift arms and cross braces of box-section construction and tilt arms of solid steel. They're engineered for high production, too—power, weight and traction are balanced for maximum efficiency. And they're easy to handle with quick-acting hydraulic controls, high reach without strain and tilt and lift levers positioned for convenient, one-hand operation.

Besides the 100 HP No. 977, largest in the line, there are two other CAT* Diesel Traxcavators—the 70 HP No. 955 and the new and improved 50 HP No. 933. All three are available with quick-change attachments. Pound for pound, in comparison with other units, these husky rigs deliver more lift, faster lift and more production. Your Caterpillar Dealer backs them with round-the-clock service. Ask him to show you how a versatile Traxcavator can cut costs and boost production for you.

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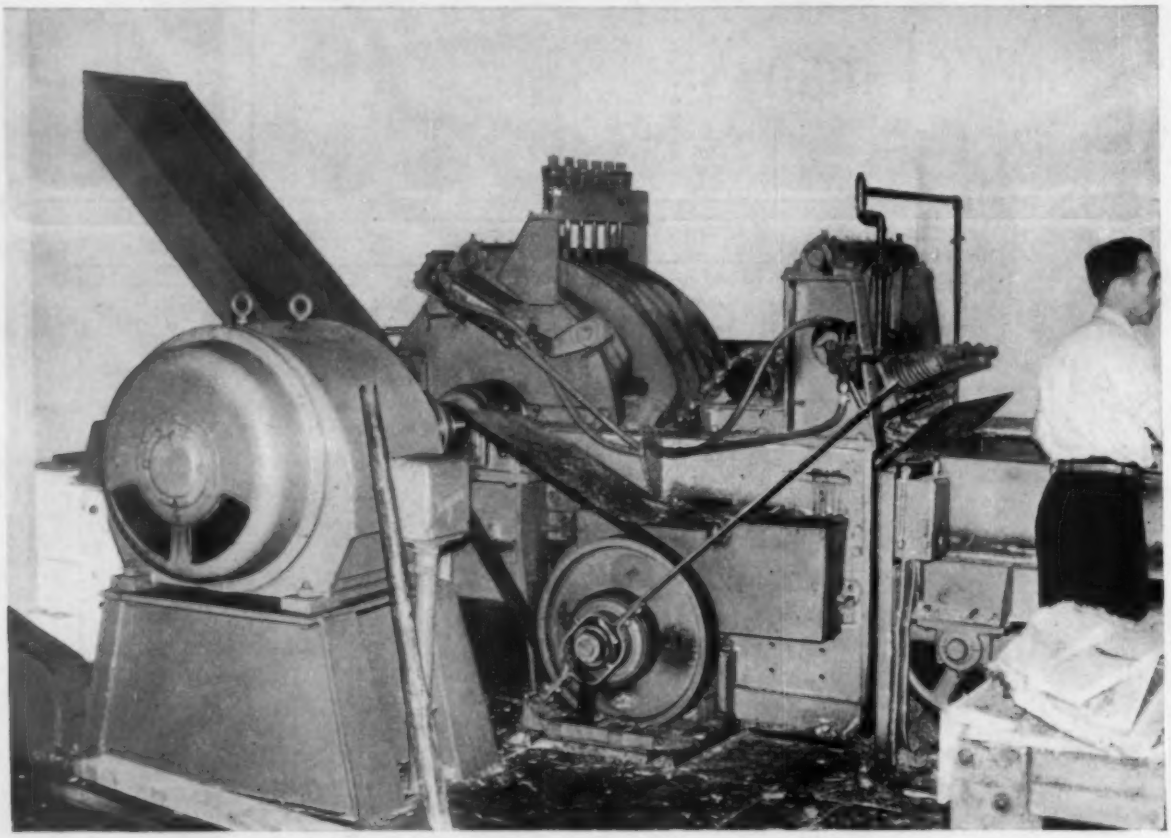
WANTED—
THE HARD WORK



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Installations of Filer & Stowell Chippers, such as the one shown above at Consolidated Paper Corporation, Pembroke, Ontario, are supplementing income at many large and small sawmills.

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* Automatic clearing cylinder.
* Individual pressure fingers which hold material until chipped.
* Simple installation.

MANY INSTALLATIONS HAVE BEEN MADE WHICH REQUIRE NO OPERATOR

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AUGUST, 1958

THE Lumberman

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How Idaco Lumber Co., Healdsburg, Calif., precuts 90% of three million feet per month, primarily for the builder, by breaking the house down into component parts and organizing production through a simple flow system.

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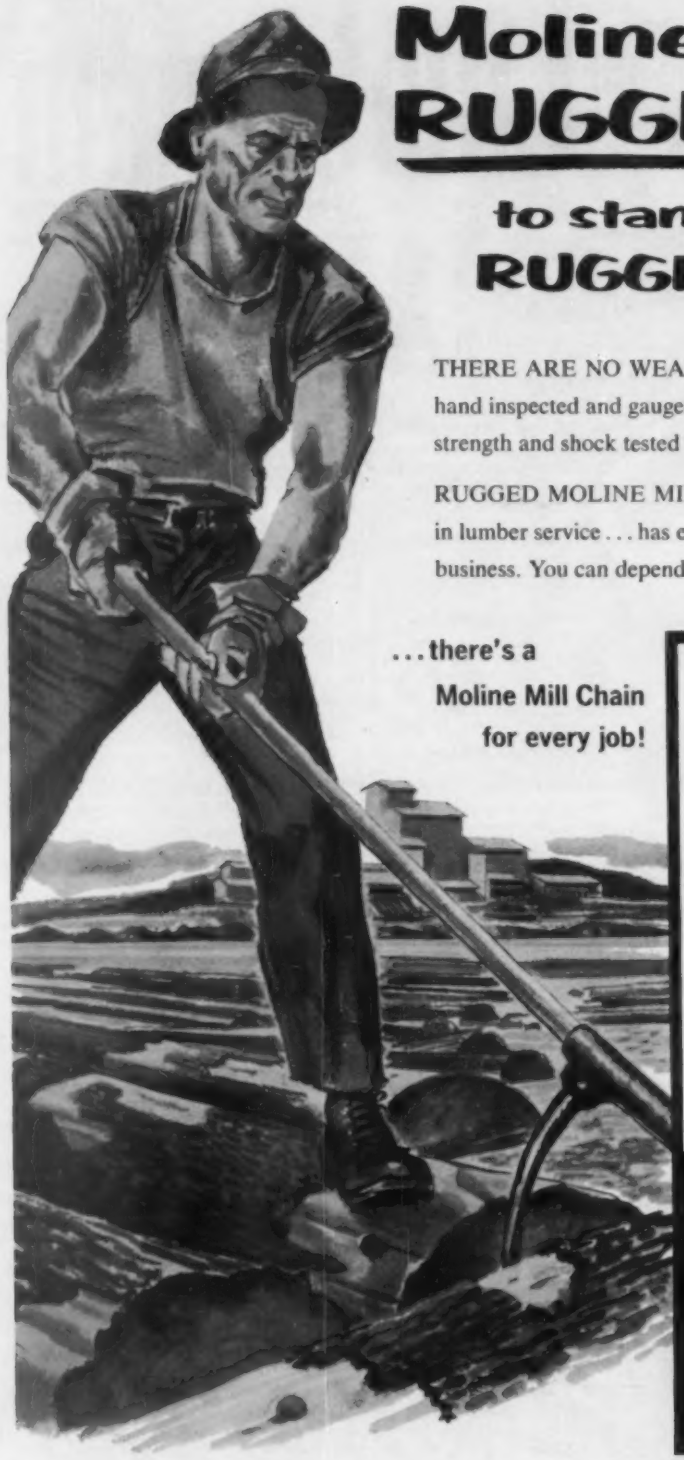
to stand the gaff of a RUGGED BUSINESS!



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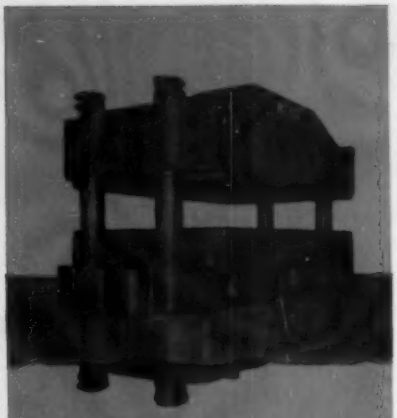
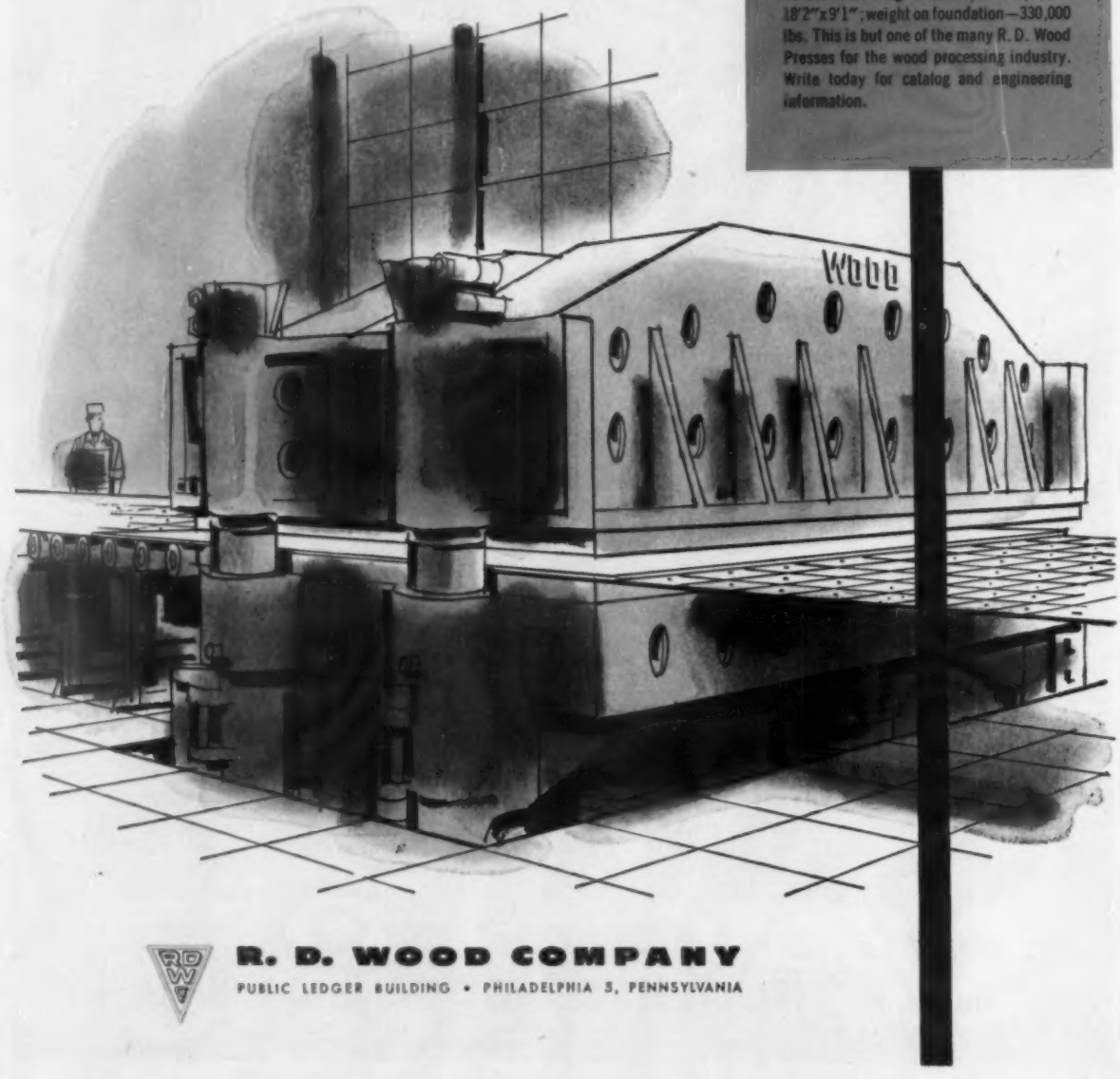


1200 ton R. D. Wood Hydraulic Press for the manufacture of composition board. Platen size—13'10" x 9'1"; operating daylight—3", open to 24" for inspection and maintenance. Press height—14'0"; floor space—18'2"x9'1"; weight on foundation—330,000 lbs. This is but one of the many R. D. Wood Presses for the wood processing industry. Write today for catalog and engineering information.



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PUBLIC LEDGER BUILDING • PHILADELPHIA 5, PENNSYLVANIA

significant industry news

General Outlook...

MORE INTER-INDUSTRY COMMUNICATION . . . Lumber industry leaders in manufacturing, wholesaling and retailing meeting recently in Colorado Springs, Colo., called attention to a lack in the past of adequate inter-industry communication with respect to major problems facing all. Improvement of these communications would result in a more aggressive joint promotion and selling effort in behalf of lumber, they concluded. The meeting was called by heads of the National Lumber Manufacturers Association, National Retail Lumber Dealers Association and the National-American Wholesale Lumber Association. Discussions also covered building components of wood, joint advertising potential of the entire industry, and reduced costs in handling wood products.

SMALL OPERATOR ASSISTANCE OPPOSED . . . An amendment to the Small Business Act which would set aside tracts of federal timber for exclusive purchase by "small operators" and would make loans available for road construction is meeting opposition in the West. Western Forest Industries Association says it does not want to be "a recipient of a giveaway by any agency . . . opposes any favoritism in bidding on timber". The amendment has passed the Senate. A small operator is defined as employing up to 250 persons.

PICKUP IN U. K. BUYING . . . United Kingdom softwood lumber buying is picking up after five months of extremely small buying and a dip in prices. Additional purchasing is forced by falling stocks during a period when sales have not dropped anything like expected. Consumption is running at roughly 200 million feet a month, and in May jumped to 230 million feet. Trade feeling in Britain is that softwood lumber purchases will be heavy until well into the fall, and that prices will probably stay around the mid-summer level. Hardwood prices are also down but imports have been maintained.

WOOD CHARCOAL GROUP ESTABLISHED . . . A new national organization, Wood Charcoal Briquet Producers Association, has been established and will be headquartered in the Prudential Building, Chicago. Officers include Owen Pyle, Kingsford Co., Iron Mountain, Mich., as president and E. M. Godat, Crossett Chemical Co., Crossett, Ark., vice-president. Announced purpose is "to promote the welfare of the wood charcoal briquet industry and to improve its service to the public."

FOREST FIRE RESEARCH LABORATORY PLANNED . . . A research laboratory to work on new methods of controlling forest fires will be built by the U. S. Forest Service at Missoula, Mont. The building will contain numerous facilities for testing characteristics of fire. Site of the lab at the forest service aerial fire depot will allow use of aircraft and smokejumper facilities. The Munitalap Foundation, Inc., New York City, is expected to continue its cooperation in forest fire meteorological research.

G-P GETS EXTENSION ON ALASKA CONTRACT . . . The U. S. Department of Agriculture has granted Georgia-Pacific Alaska Co. an extension of three years in which to qualify for the final award of a timber sale contract involving 7.5 billion feet of timber in the Tongass National Forest in southeast Alaska. If G-P qualifies for final award, the company may enter into a 50-year timber sale contract and would build a plant by July 1, 1964.

PLYWOOD GLUE FROM BARK . . . Rayonier, Inc., has developed a new silvichemical from tree bark which yields a low-cost, weatherproof, thermosetting adhesive for plywood. Samples derived from bark of western hemlock are said to meet all present commercial requirements for exterior type plywood.

RAIL RATES CUT ON PACIFIC COAST HARDWOODS . . . Transcontinental rail rates on shipment of Pacific Coast hardwoods have been reduced, allowing them to move across the United States at existing softwood rates. The new tariff goes into effect September 1, will apply to birch, maple and oak. Lower rates have already been granted western alder and cottonwood.

PALLET ACTIVITY PICKING UP . . . The downtrend of the first six months in the wooden pallet industry has halted and order files indicate that an upturn is near at hand. The downtrend earlier was not noticeable west of the Rockies, but producers in the south, southwest, east and mid-west reported business spotty.

MORE BACKING ON PROMOTION . . . The National Oak Flooring Manufacturers Association and the Northern Hemlock and Hardwood Manufacturers Association have joined in the lumber promotion program of the National Lumber Manufacturers Association. The NLMA says the program has the backing of 95.6% of its federated association, on the basis of dues income to the NLMA.

On the Plant Front . . .

POTLATCH BUYS BRADLEY LUMBER CO. . . . Purchase of Bradley Lumber Co. of Warren, Ark., and tentative plans to construct a pulp and paper mill in Arkansas have been announced by Potlatch Forests, Inc., Lewiston, Ida. Sale price is reported at $20 million. Southern Lumber Co., also Warren, was merged with PFI in 1956, and its timber holdings, added to Bradley's, provide 346,000 acres as a supply source for a pulp and paper operation. Manufacturing facilities of Bradley include hardwood and pine sawmills, a flooring plant and a furniture parts operation. The plant produced nearly 30 million feet of lumber in 1957.

CALIFORNIA FACILITIES PURCHASED . . . Woodleaf Timber Corp. has purchased the Sacramento Box & Lumber Co., L. J. Carr & Co., and Gordon-MacBeath Hardwood Co. in Sacramento from P. V. Burke and G. J. Thompson. Woodleaf is headed by J. D. McCann, owner of Trinity Lakes Lumber Co. in Trinity county, and T. D. Bennett, owner of Bennett Veneer Factors, Portland, Ore., and San Francisco, Calif. Facilities acquired included substantial sustained yield timber reserves, a modern sawmill at Woodleaf, a remanufacturing plant in Sacramento, the L. J. Carr wholesale operation which Carr will continue to manage, and the hardwood operation. The new owners plan to consolidate the operation and then expand.

ROBERT DOLLAR REACTIVATING SAWMILL . . . Back in operation is the Robert Dollar band sawmill at Glendale, Ore. The mill has been revamped to cut cants up to 32 feet long for the company's adjoining gang mill. Robert Dollar now also owns the Dollar & Patterson mill which is located adjacent to its gang and band plants. The Dollar & Patterson plant has a capacity of 100,000 feet a day.

OREGON MILL SOLD . . . Valsetz Lumber Co., Portland, Ore., has purchased the Collins Pondosa Pine Co. in Pondosa, Ore. Production at the mill is being continued, according to M. Gales Beals, vice-president of Valsetz.

High costs got you behind the eight ball?

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- ✓ **the standard of quality in its field**
- ✓ **only oil of its type which consistently meets requirements for leading diesel engines**
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- ✓ **developed by lubricant specialists at Shell research laboratories**

NEW OREGON MILL PLANNED . . . A sawmill cutting 30,000 feet a day will be built near New Era, Ore., by Robert T. Samuels of Samuels Lumber Co., Canby, Ore.

MOULDING PLANT PLANNED . . . A moulding plant is being built at Jasper, Ore., by the Jasper Lumber Co. Production is anticipated by fall when kiln-dried lumber will be purchased from nearby mills for processing.

PLYWOOD PLANT REBUILT . . . Picayune Veneer & Plywood Co. in Picayune, Miss., has been completely reconstructed following a fire several months ago. J. G. MacDonald, Sr., is president and manager.

EXPANDING FOR GREATER UTILIZATION . . . Lincoln Lumber Co., in Lincoln, Wash., will spend $250,000 at its sawmill to increase product recovery from logs. The firm will install a chipper and barker to produce 100 units of chips for sale to a pulp firm. Contract for sale of chips has been arranged. The installation is expected to be completed by November.

NEW IDAHO MILL OPERATING . . . The Ashton Lumber Co. at Ashton, Ida., is now in operation and will have a capacity of 60,000 feet a day when in full production. Owners are Alden, Darryl and Forest Beck.

Personalities . . .

EASON HEADS F.P.R.S. . . . W. Jeter Eason, Nickey Brothers, Inc., Memphis, Tenn., took over as president of the Forest Products Research Society at the recent annual meeting of the group, succeeding Dr. F. H. Kaufert, University of Minnesota school of forestry. Dr. E. S. Harrar, dean of the school of forestry, Duke University, Durham, N.C., becomes president-elect, and R. H. Berry, Scott Lumber Co., Burney, Calif., is vice-president.

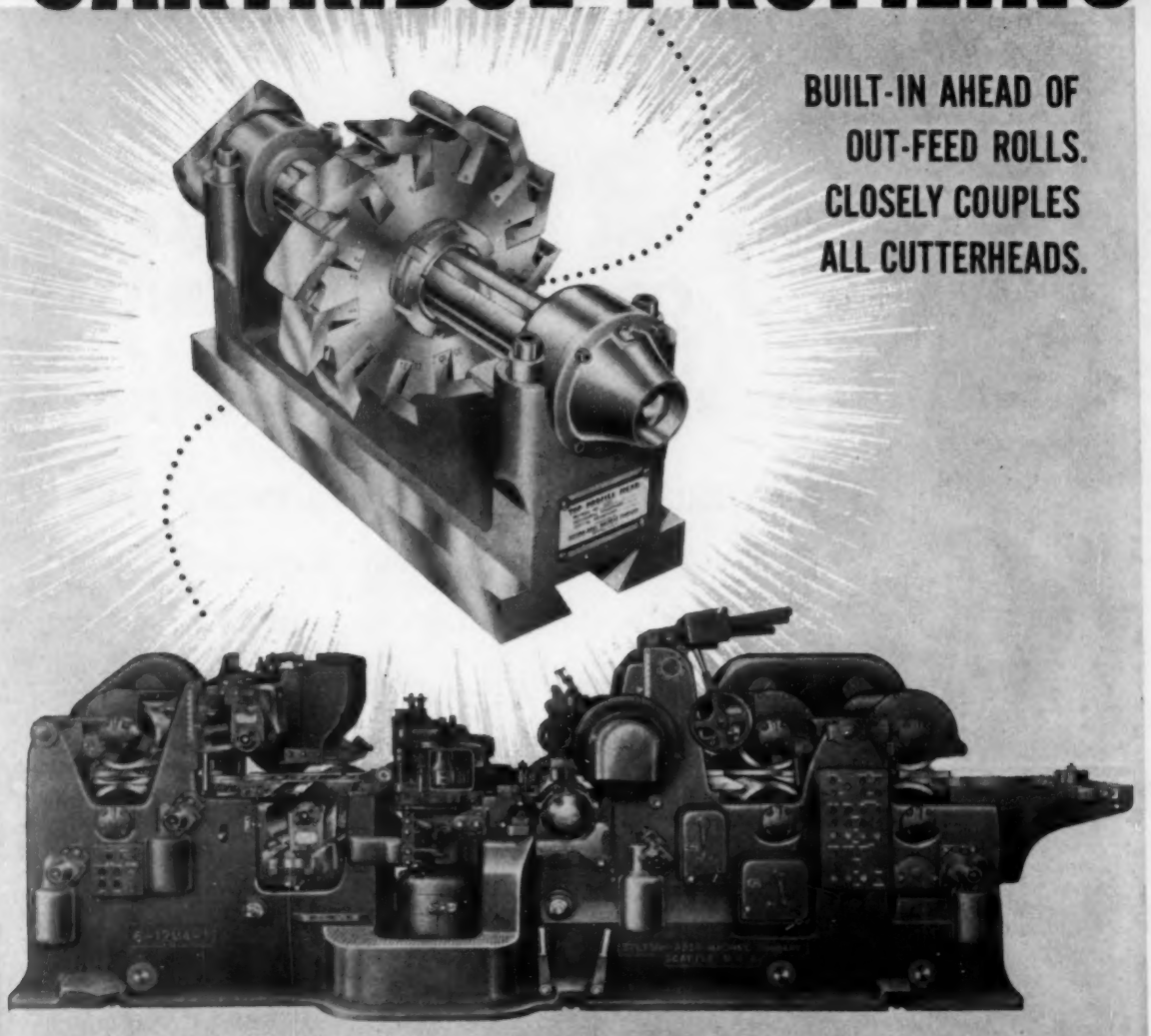
PROMOTION AT MANDO . . . C. R. Binger, general manager of the National Pole & Treating division of Minnesota and Ontario Paper Co., has been promoted to assistant to the president. Einar T. Erickson, industrial sales representative for the company's Insulite division, succeeds Binger in the pole and treating department.

PLYWOOD DISTRIBUTORS PICK REMMEL . . . New president of the National Plywood Distributors Association is Roland R. Remmel, Southland Building Products Co., Little Rock, Ark. Other officers include Thomas H. Hammer, National Plywoods, Inc., Chicago, Ill., first vice-president; Jack Walker, United Plywood Corp., Birmingham, Ala., second vice-president. Mahlon Munson was elected executive vice-president. The Scroll of Honor, awarded annually, went to M. C. Davidson, Houston Sash & Door Co., Houston, Tex.

SIMPSON PROMOTES BACON . . . C. H. Bacon, Jr., has been named to the newly created position of executive vice-president of Simpson Timber Co. and will assume responsibility for the company's over-all sales and operational functions relating to Simpson divisions in Oregon, Washington and California. He will headquarter in Seattle, Wash. He is succeeded as vice-president and general manager by Hal W. McClary.

NEW HALLACK & HOWARD OFFICIALS . . . U. R. Armstrong has been named chairman of the board of Hallack & Howard Lumber Co., Denver, Colo., and is succeeded as president by F. Clifton Schmidt who was formerly general manager of Marshall-Wells Co. in Portland, Ore.

*CARTRIDGE PROFILING



BUILT-IN AHEAD OF
OUT-FEED ROLLS.
CLOSELY COUPLES
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An original cost reducing feature of Stetson-Ross Planer-Matchers for over 45 years

*Pre-set "cartridge" profile units built-in ahead of outfeed rolls give you highest quality millwork, and instantaneous pattern change through the use of spare "cartridge units." These are fundamentals of good machine design, developed and perfected by Stetson-Ross.

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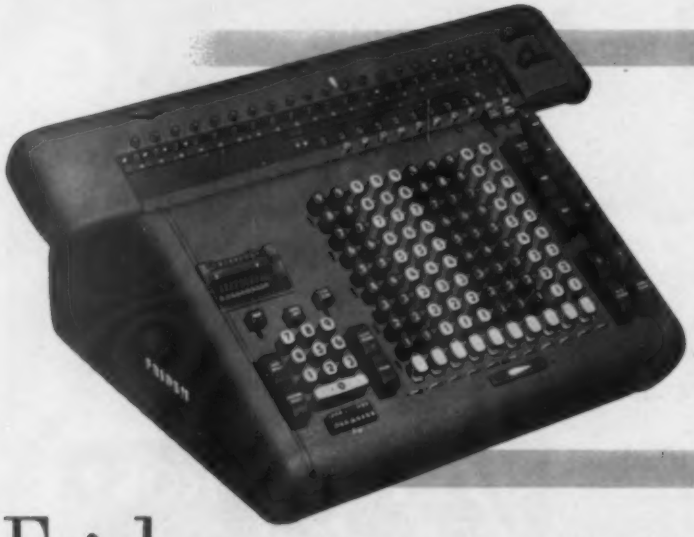
—for this reason: So automatic is the Friden it performs more steps in figure-work *without operator decisions* than any other calculator ever developed!



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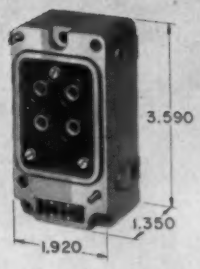
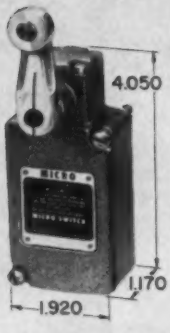
PLUG IN

18 PA1 Terminal Enclosure—is common to all actuator assemblies in the "200LS" series. Can be mounted from front, back or either side.





Actuator plugs into terminal enclosure—contains all moving mechanical and electrical parts.

NEW...

"Plug-in Limit" Switch cuts costly downtime

Compact sealed enclosures with choice of 6 actuators meet wide range of industry needs

Here's a precision limit switch you can replace complete in 20 seconds! Downtime is all but eliminated!

The switch enclosure of this new "Plug-in Limit" switch, in any of six actuator styles, plugs into the terminal enclosure like a radio tube . . . is precisely positioned by dowel pins and secured by two No. 10 screws. Together, the two parts form a complete unit, sealed against oil, water, dirt and dust.

The "Plug-in Limit" is two-circuit double throw. Electrical rating is 10 amps. 120, 240, 480 vac; ½ H.P. 120 vac; 1 H.P. 240 vac; 0.8 amp. 115 vdc; 0.4 amp. 230 vdc; 0.1 amp. 550 vdc. Pilot duty rating is 600 vac max. Meets NEMA Industrial Control Standards.

Authorized distributors everywhere maintain stocks. MICRO SWITCH technical specialists are available at the sales office near you. For details of the new "200LS" Series, send for Catalog 83.

—•—

MICRO SWITCH...FREEPORT, ILLINOIS
A division of Honeywell
In Canada: Honeywell Controls, Ltd., Toronto 17, Ont.

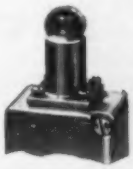
—•—

The two-word name MICRO SWITCH *is* NOT *a generic term. It is the name of a division of Honeywell.*

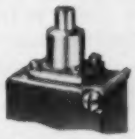
201LS3 Adjustable Arm Rotary Actuator—roller lever arm is adjustable to any point in a 2½-inch range. Head assembly can be positioned to any of 4 sides of switch. Actuating direction and operating point are adjustable.

208LS1 Coil Spring Actuator—flexible spring actuator for multi-direction operating motion

201LS10 Rod Actuator—provides light actuating force. See adjustability details under 201LS1 below



205LS1 Roller Plunger Actuator—adjustable at 90° angles



202LS1 Push Plunger Actuator—for in-line actuating motion

201LS1 Roller Arm Actuator—field adjustable for actuation clockwise, counter-clockwise, or in both directions. Arm is adjustable through 360°. Head can be faced in any of four directions.

Look for the name of MICRO SWITCH *Authorized Distributors in the Yellow Pages*

Honeywell
MICRO SWITCH PRECISION SWITCHES

SAFETY AWARD PROGRAM participants included, from left, seated, Arthur Francis, safety director, Workmen's Compensation Board; Lyle Wicks, provincial minister of labor; W. E. Breitenbach, executive vice-president, Alaska Pine & Cellulose. Standing, from left, Clarence Murray, IWA; Peter Sloan, manager, APL lumber division; Harry Berger, Union of Operating Engineers; Gene Rolston, plant manager, Alaska Pine & Cellulose.

B.C. Mill Safety Mark Wins Centennial Award

Marpole sawmill division of Alaska Pine & Cellulose, Ltd., in Vancouver, B.C., recently completed 60,075 accident-free man days to far exceed the province's industry target of 18,517 set by the Workmen's Compensation Board and the provincial department of labor.

In recognition of this achievement, Minister of Labor Lyle Wicks presented to employees and management of the mill, formerly known as Universal Lumber & Box Co., the Centennial Safety Award (so named because this is British Columbia's centennial year).

The Marpole division employs about 450 men and has had an outstanding safety record during the past decade, having won numerous awards from the National Safety Council and the Workmen's Compensation Board.

W. E. Breitenbach, executive vice-president, Alaska Pine & Cellulose, accepted the Centennial award on behalf of the mill employees, represented by Clarence Murray of the IWA; and Harold Berger, business representative of the Union of Operating Engineers. The awards were then presented to Gene Rolston, plant manager, and Gordon Payne, employee representative, Union of Operating Engineers.

●

Two Johnson Safety Awards Scheduled

Separate awards for the lowest Johnson Index safety mark for sawmilling and logging will be made in the future, it was determined at the annual meeting of the California Lumbermen's Accident Prevention Association held in San Francisco. Previous awards have gone to a combination index.

At the meeting the 1957 perpetual award plaque of the association was awarded to the McCloud River Lumber Co., Mt. Shasta district, for its 14.583 Johnson index. Other outstanding safety marks acknowledged were Union Lumber Co., C. R. Johnson Redwood district, 15.811; Stockton Box Co., Mother Lode district, 18.149; Irory Pine Co. of California, Mt. Whitney district, 23.428.

Harold Neville, Pacific Lumber Co., Scotia, was elected president, succeeding Herbert McMahan, Pine Logging Co., Fresno, Calif. Other new officers include Ed O'Connor, Stockton Box Co., Stockton, vice-president; Nat Edwards, Wood Products Co., Oakland, secretary-treasurer.

The Association's "Cause of Accidents" tabulation for the logging and lumber industry, compiled from experience of member companies during 1957, follows:

Cause of Accidents	Over-all Total Accidents	Percentage of Over-all Total
Use of hand tools	50	4.4
Falling limbs, trees	35	3.1
Rolling logs	37	3.2
Lines, cables, chockers, tongs, etc	26	2.3
Falling, slipping, stumbling	238	21.0
Slivers, jaggers, etc.	16	1.4
Poison vines, insects	15	1.3
Lifting, pushing, pulling	240	21.1
Struck by falling, flying objects	154	13.6
Fires, explosions	2	.2
Contact with operating machinery	50	4.4
Contact with saws, knives in motion	40	3.5
Saw kickbacks	10	.9
Hand handling lumber and material	120	10.6
Foreign bodies from immediate job	26	2.3
Burns and flashes	12	1.1
Traveling vehicles and equipment	50	4.4
Drowning, asphyxiation	2	.2
Unclassified	11	1.0
Totals	1134	100.0

Total hours of exposure—33,802,079.
Total manpower covered—18,163.

●

Improved Safety Noted at Crossett

The Crossett Company, Crossett, Ark., achieved the best safety record in its history during 1957 as disabling injuries were reduced by about one-third from the previous year. It was the fourth consecutive year to show such a substantial reduction.

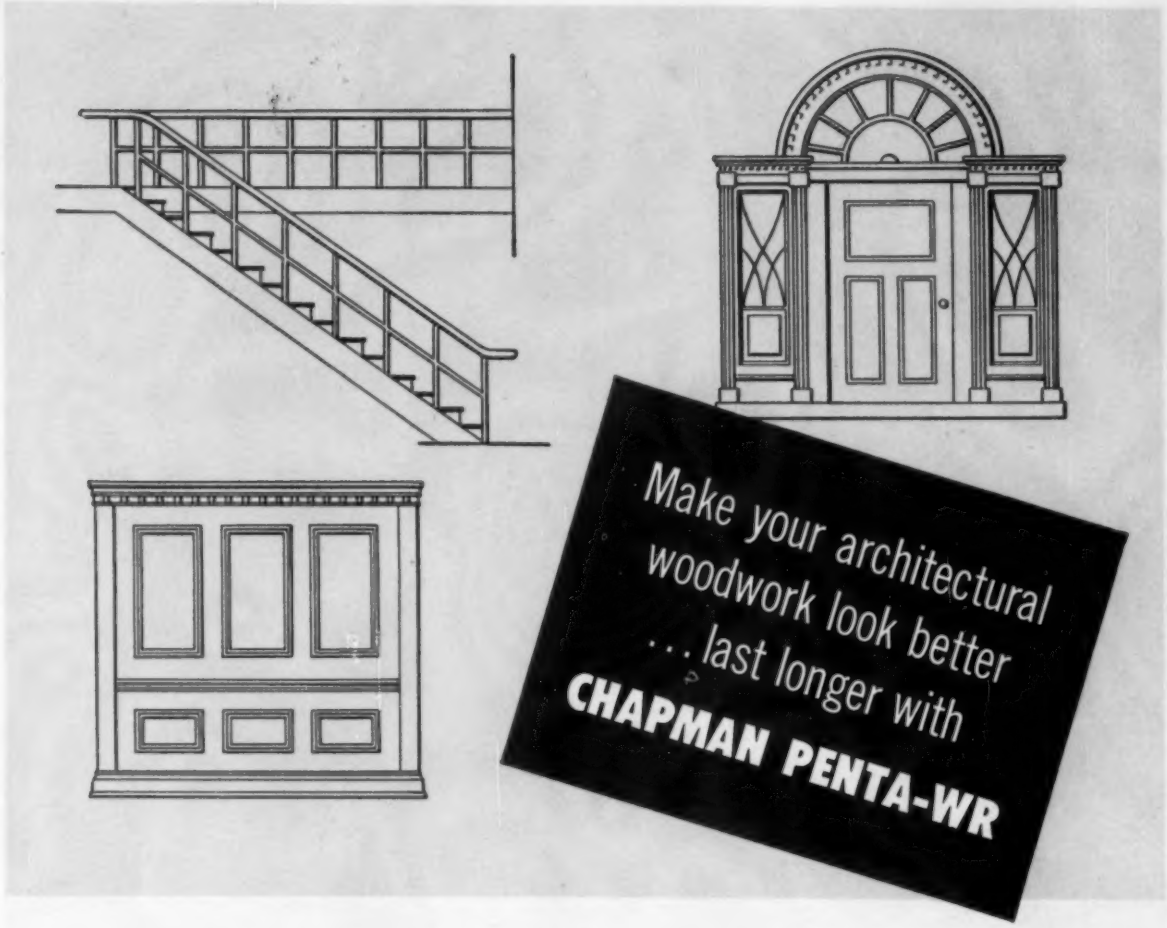
As a whole, the Crossett company's 2,300 employees worked 4,750,349 man-hours during 1957 with only 25 lost-time accidents, for a frequency rate of 5.26 per one million man-hours worked. This compares with 36 accidents in 4,898,826 hours in 1956, according to R. E. Bell, safety director for The Crossett Company.

The greatest improvement was made at Crossett Lumber Company which set a new safety record with a 50% drop in disabling injuries. Employees there cut the accident rate from 24 to 11.

Employees at Crossett Paper Mill experienced 10 disabling injuries in just over two million man-hours for a frequency rate of 4.97. This was not quite as good as their 1956 record when only nine accidents occurred for a rate of 4.34.

As has been the case for the past four years Crossett Chemical Company experienced only one disabling injury in 330,751 man-hours for a rate of 3.02.

KICKBACK HAZARD through fingers of the edger or knots imbedded in lumber is eliminated at Michigan-California Lumber Co.'s Camino, Calif., mill with Plexiglass panel suspended in front of the feed position. Panel hangs below the shield which curtains light from shadowguide lights.



Inexpensive water-repellent preservative treatment adds to value and appearance

The fine craftsmanship of your specialty millwork deserves to be preserved. And nothing preserves and protects as well as PENTA-WR. This improved water-repellent preservative gives maximum lifetime resistance to damage by rot, insect attack, stain, mold, mildew, swelling and shrinking.

Easy to apply and non-sludging, PENTA-WR protects without staining. It keeps wood bright, clean and new-looking longer, and improves adherence of any finish. PENTA-WR treatment is inexpensive, yet it adds much to the value of your products.

Specifications always should include PENTA-WR treatment for both interior and exterior millwork.

If you aren't now equipped to provide this profitable service, write Chapman Chemical Company. We'll gladly recommend treating equipment and schedules and provide other technical assistance.

Penta-WR protects
millwork • cabinets
moldings and trim
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paneling
plywood • siding
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FOR WATER-REPELLENCY ONLY
Chapman Pen-A-Seal. Lower cost—non-toxic. Controls shrinking and swelling.

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Meets Federal Specification TT-W-572 and Military Specifications

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WATER REPELLENT PRESERVATIVE
APPROVED
NATL. WOODWORK MFRS. ASSN.

Mail for more information

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Please send data on treating millwork with PENTA-WR.

*Name*_____

*Address*_____

Saw gumming with these wheels brings you extra savings

57 ALUNDUM B11 wheels add the "Touch of Gold" that keeps efficiency high and costs low*

Here's how this Norton abrasive-and-bond combination saves you more than saws on every saw gumming job:

57 ALUNDUM abrasive is not only cool cutting, which protects your saws against heat damage. It cuts fast, holds form steadily and gives long, useful service life.

The B11 resinoid bond safeguards these advantages. By assuring uniformity of wheel structure and balance, it improves performance. Also, by providing a complete range of hardness grades, in half-grade increments, it enables you to choose exactly the right wheels — precisely duplicated with every reorder.

See your Norton Distributor for 57 ALUNDUM B11 wheels — or any other types you need to improve your equipment and cut your grinding costs. The Norton grinding wheel plant in Santa Clara, Cal., supplies West Coast distributors with all required stocks assuring Western users fast dependable service. NORTON COMPANY, General Offices, Worcester 6, Mass. Plants and distributors around the world.

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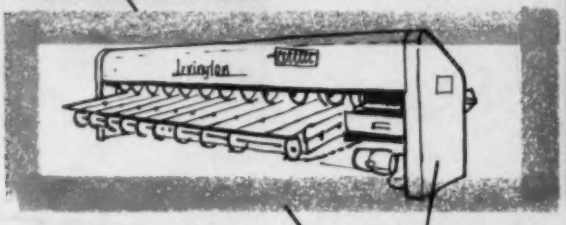
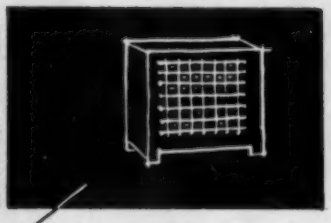
*Trade-Mark Reg. U. S. Pat. Off. and Foreign Countries

Making better products . . . to make your products better

NORTON PRODUCTS Abrasives • Grinding Wheels • Grinding Machines • Refractories • Electrochemicals — BEAR-MANNING DIVISION Coated Abrasives • Sharpening Stones • Pressure-Sensitive Tapes

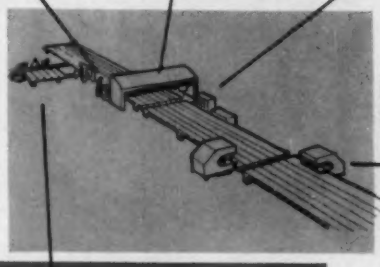
UNIT & PLANT AUTOMATION



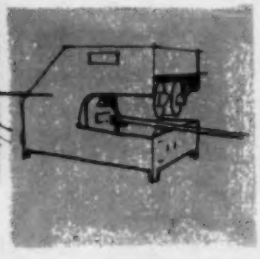


SYSTEMS CONTROL

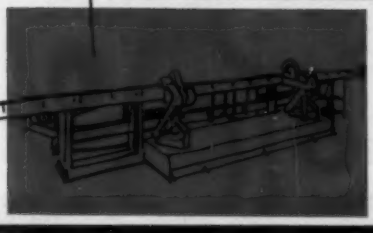
END-SURFACING



MATERIAL FLOW LAYOUTS



BRAND IDENTIFICATION & PROMOTION



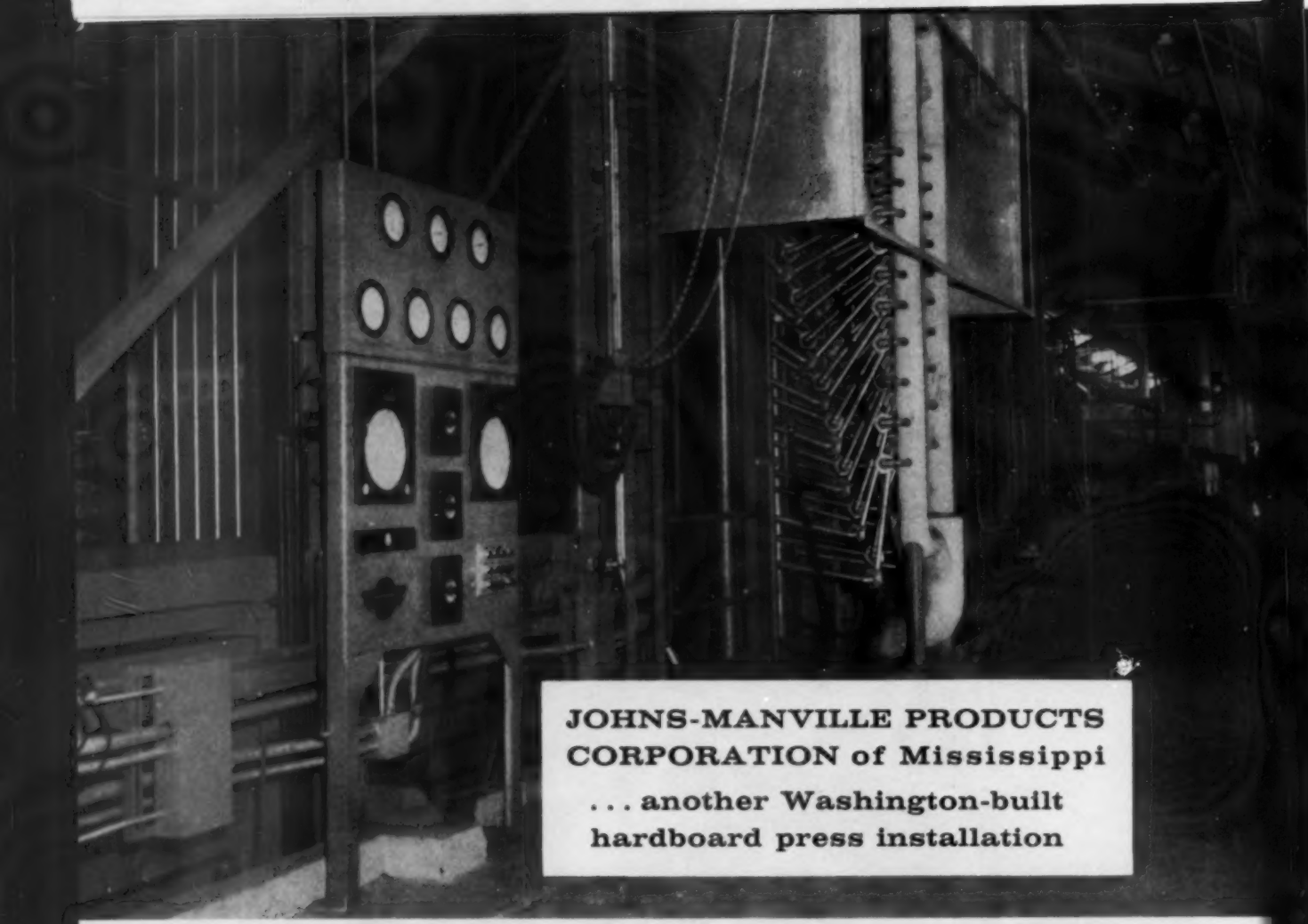
GRADE & RETRIMMING

IRVINGTON QUALITY

Irvington
MACHINE WORKS

The Irvington name has been synonymous with quality since the company was first established in a barn loft in 1907. Using quality as a foundation, Irvington has constantly offered new techniques and equipment to help the woodworking industry increase its efficiency and competitive position.

TWO PLANTS: 1808 N. E. 7th AVENUE, PORTLAND 12, OREGON • 3 COLFAX N. E., GRAND RAPIDS 5, MICHIGAN



JOHNS-MANVILLE PRODUCTS CORPORATION of Mississippi

. . . another Washington-built hardboard press installation

Above is a view of the production line at Natchez with tempering and humidifying equipment in the background, and in the foreground the 3650-ton Washington hot press and controls for automatic operation of the curing stage. Furnished with the press, the control panel in the foreground enables presetting and continuous recording of pressure, temperature and cycle time. The 20-opening press cures twenty mats per load.

Using a new semi-chemical wet process, the new plant can produce finished hardboard panels up to 4′ x 16′ in density ranges from 56 lbs. to 69 lbs. Current production is 65-lb. board.

• • •

Eight other outstanding plants producing particle board, flakeboard and wet and dry process hardboard are featured in the new 16-page brochure "Washington presses and accessory equipment." In-plant photographs, operating data and equipment diagrams provide a valuable round-up of the world-wide production and the industry-wide acceptance of Washington-built press equipment. Your copy is available FREE by writing to Washington Iron Works.

LOCATION: Natchez, Mississippi
PLANT ENGINEERS: Johns-Manville Corporation
PRODUCT: "PanLBoard"® HARDBOARD

Johns-Manville Products Corporation of Mississippi is the newest name in quality hardboard. In the completely modern plant at Natchez, finished hardboard products of several different types roll off the highly automated production line for home and industrial construction. These products include tempered, standard, underlayment and perforated PanLBoard® hardboard in thicknesses from ⅛" to ¼".

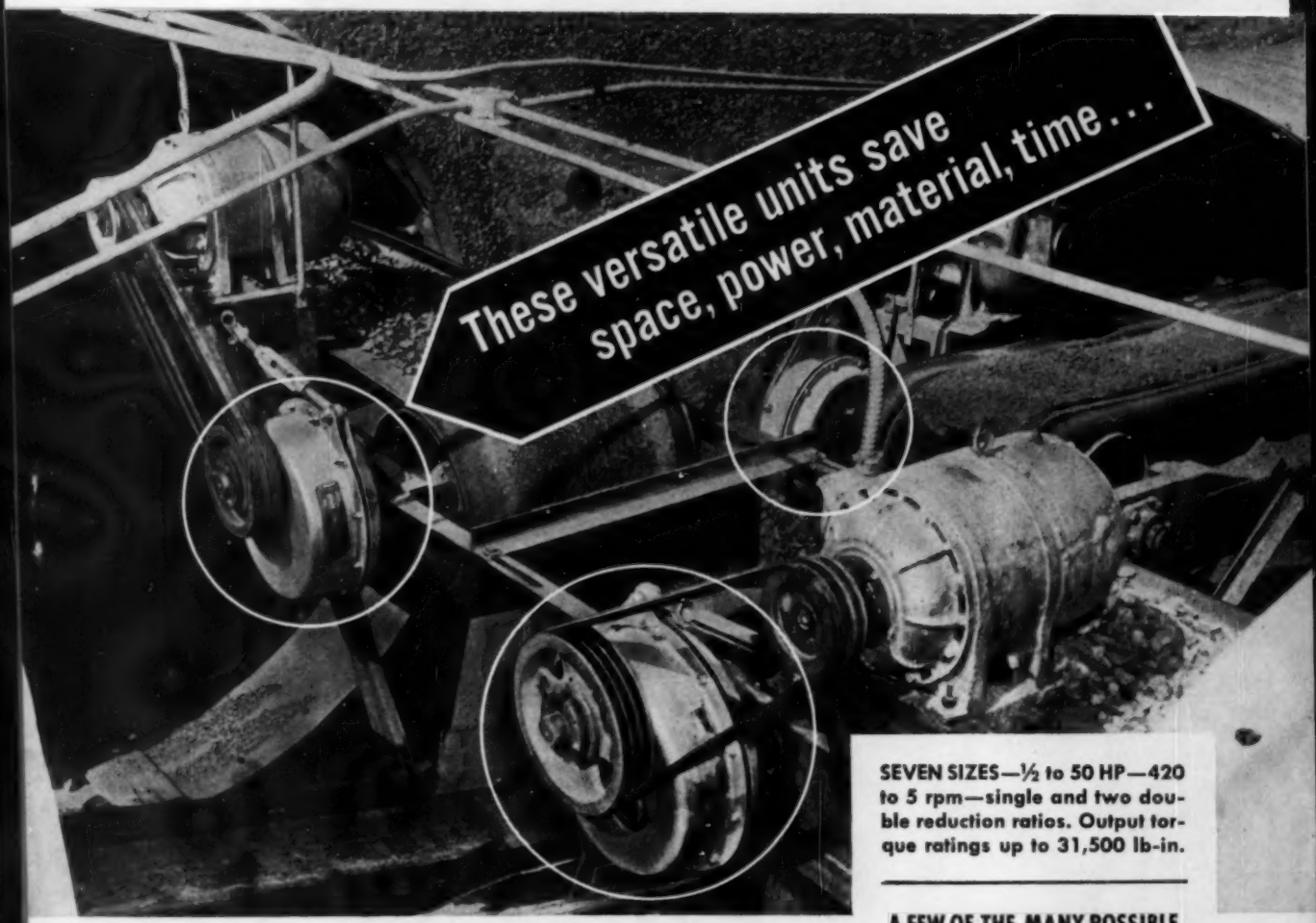
A Washington 20-opening hot press, one of the largest in the industry, is the key to fast production of uniform, high quality hardboard. Annual capacity is 60 million square feet on a ⅛" basis.

Washington presses and accessory equipment units are designed and built to meet individual plant and process requirements of board size, thickness and density range, control of pressure, temperature and cycle time, and production rate. For complete information write to Washington Iron Works, 1500 Sixth Avenue South, Seattle 4, Washington.

WASHINGTON presses and accessory equipment

HOT PLATE PRESSES • PULP BALING PRESSES • SPECIAL HYDRAULIC PRESSES • AUTOMATIC PRESS LOADERS AND UNLOADERS • COMPLETE DRY PROCESS HARDBOARD FORMING LINE EQUIPMENT

WASHINGTON IRON WORKS



SEVEN SIZES—½ to 50 HP—420 to 5 rpm—single and two double reduction ratios. Output torque ratings up to 31,500 lb-in.

FALK ALL-STEEL Shaft Mounted Drives

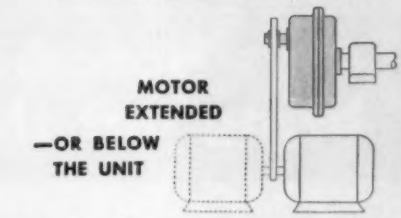
The photograph above typifies the way FALK Shaft Mounted Drives furnish the economical solution to problems of efficient speed reduction in a limited space. Within their rated capacities, these versatile reducers are designed to drive any machine and to fit any space requirement.

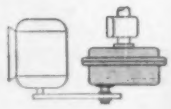
FALK Shaft Mounted Drives mount on the driven shafts and are connected by V-belt or chain to any convenient rotating power source. Unlimited choice of output speeds between 420 and 5 rpm is made possible by varying the ratio of driving sheaves or sprockets.

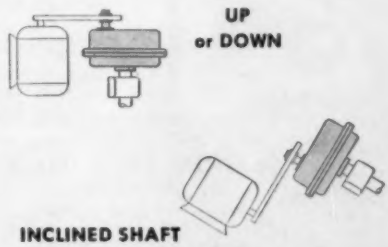
These units, with precision-cut gears of highest efficiency, use a minimum of power. They need no adjustable motor bases or slide rails; thus they save material. And, because they are readily available and easily installed or moved, they save time. Best of all, they are backed by FALK's unmatched experience in precision-gear manufacture.

Promptly available from factory and distributor stocks, from *coast to coast*. Ask your Falk Representative or Distributor for details—or write us for **Bulletin 7100.**

A FEW OF THE MANY POSSIBLE DRIVING ARRANGEMENTS







THE FALK CORPORATION, 3001 W. CANAL ST., MILWAUKEE 1, WIS.

Representatives and Distributors in Most Principal Cities

Manufacturers of

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- Speed Reducers
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- Shaft Mounted Drives
- High Speed Drives
- Special Gear Drives
- Single Helical Gears
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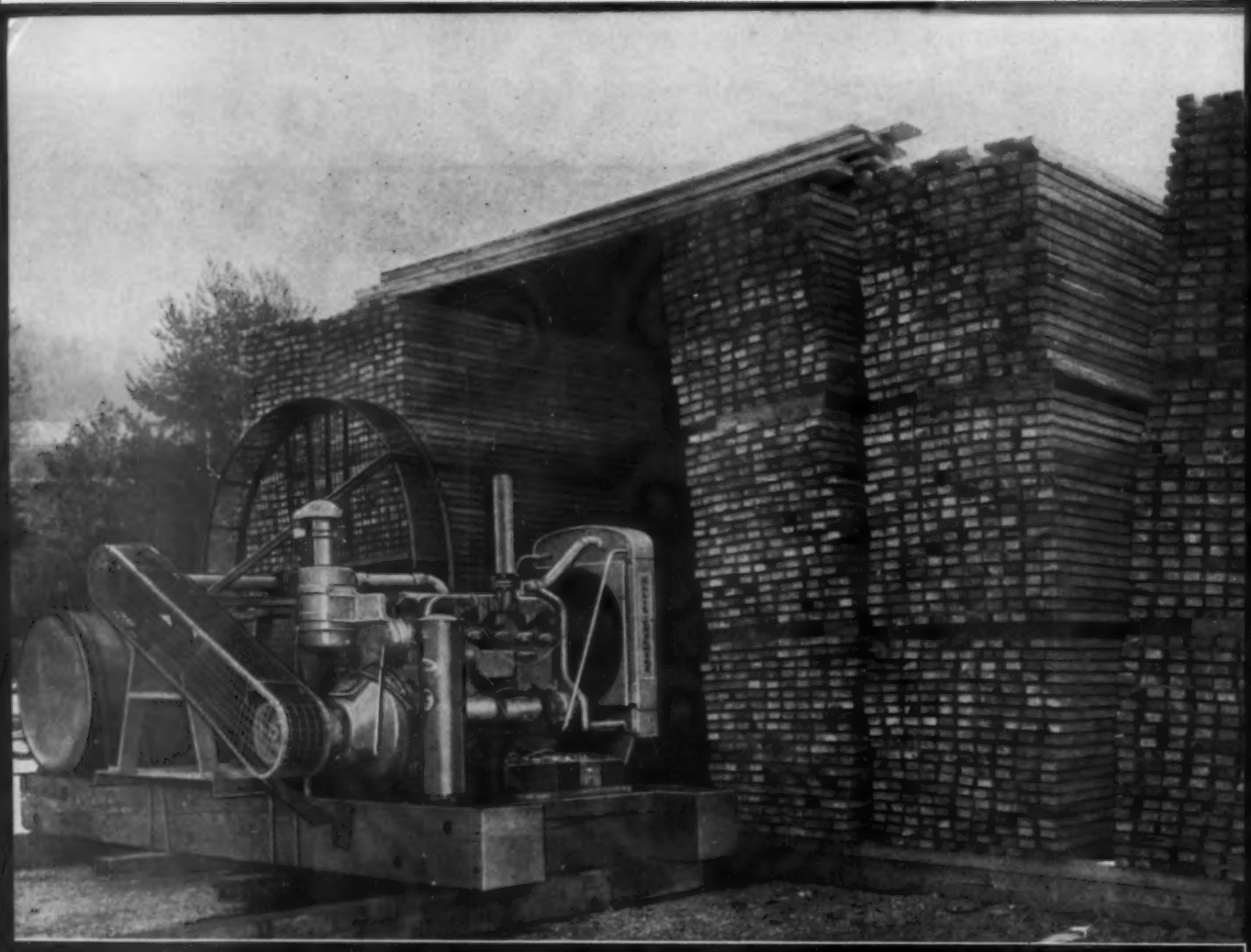
- Steel Castings
- Weldments
- Contract Machining

FALK

...a good name in industry



How Allis-Chalmers engines bring out the best in any equipment

YOUR EQUIPMENT DOES MORE when powered by Allis-Chalmers high-torque, high-usable-horsepower engines. There is a minimum of pull down due to sudden loads, with quick recovery of engine speed — and real lugging power at slow speeds.

KEEPS WORKING DAY AFTER DAY. There is unusual simplicity in rugged Allis-Chalmers engines. Diesel models, for instance, have 30 to 50 percent fewer wearing parts than competitive engines. Less can go wrong when parts are fewer and stronger.

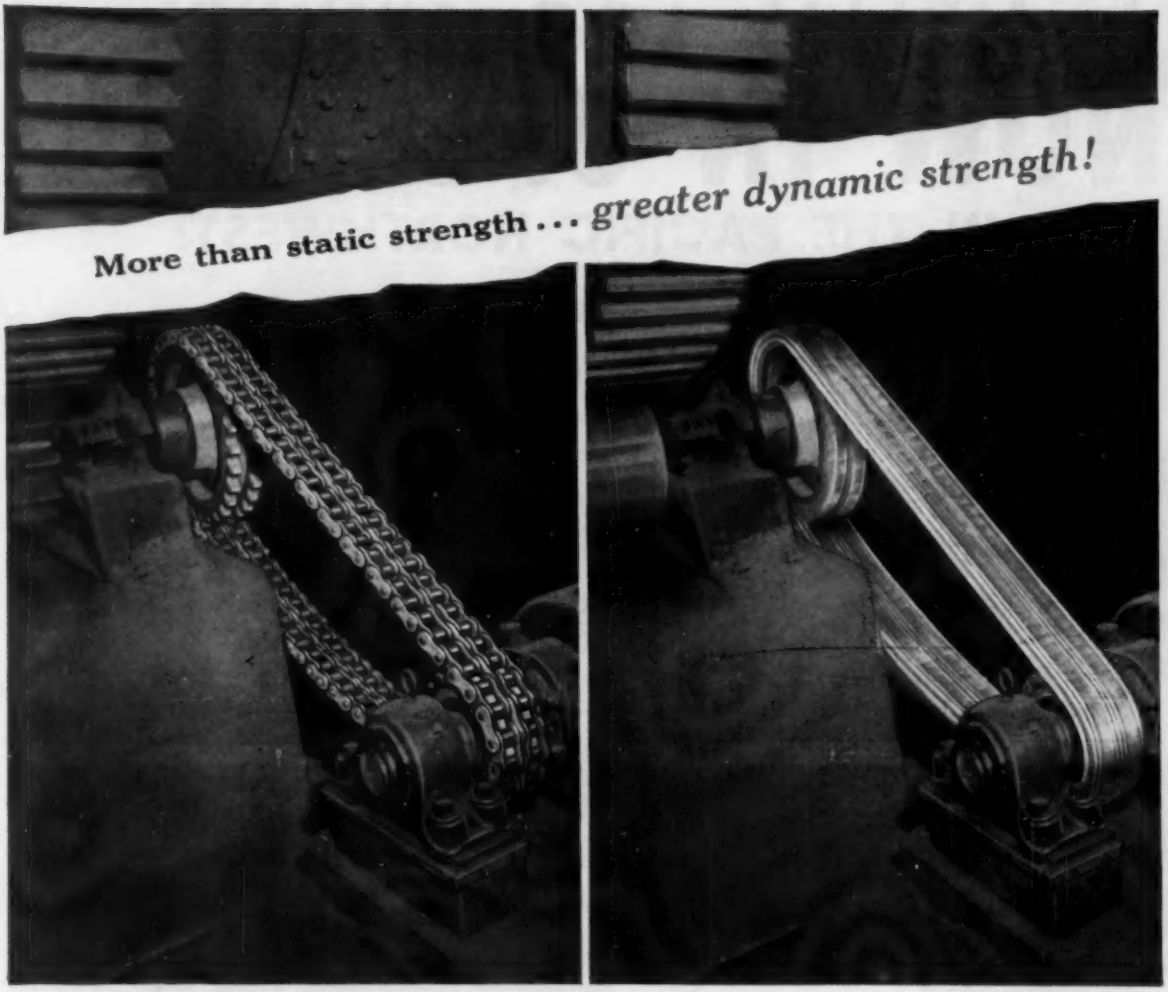
GETS BACK TO WORK FASTER. Simplicity means easier servicing, too, for Allis-Chalmers engines. They are back to work quickly because you are close to fast parts and service, wherever you are.

See your Allis-Chalmers dealer for full information on engines that will get the most out of *your* equipment — *any* type or size, 9 to 516 hp; *any* fuel, LP or natural gas, gasoline or diesel; for *any* application. Allis-Chalmers, Engine-Material, Milwaukee 1, Wisconsin.

BC-10A

ALLIS-CHALMERS

A-C ALLIS-CHALMERS



RESISTANCE TO TENSILE STRESS is achieved with properly heat-treated, accurately machined side bars made of premium steel and fitted with properly hardened pins, bushings, rollers.

STRENGTH OF CHAIN IN MOTION results from such refinements as pitch-hole preparation, micro-finish of parts, special processing of side bars, pre-lubrication, rigid quality control from materials selection to final boxing.

Big reason for the extra life from LINK-BELT roller chain

STARTING shock, heavy loads and impact of sprocket engagement on modern heavy-duty machinery requires a chain that will resist fatigue. That's why Link-Belt gives you *greater dynamic strength* to shrug off stresses. Pre-stressing, closer heat-treat control, lock-type bushings, shot-peened rollers—all these Link-Belt refinements contribute extra stamina for extra life . . . provide smoother, more efficient chain performance . . . reduce drive and conveying costs.

You have a choice of single- or double-pitch, single- or multiple-width chain. See your Link-Belt office or authorized stock-carrying distributor for facts.

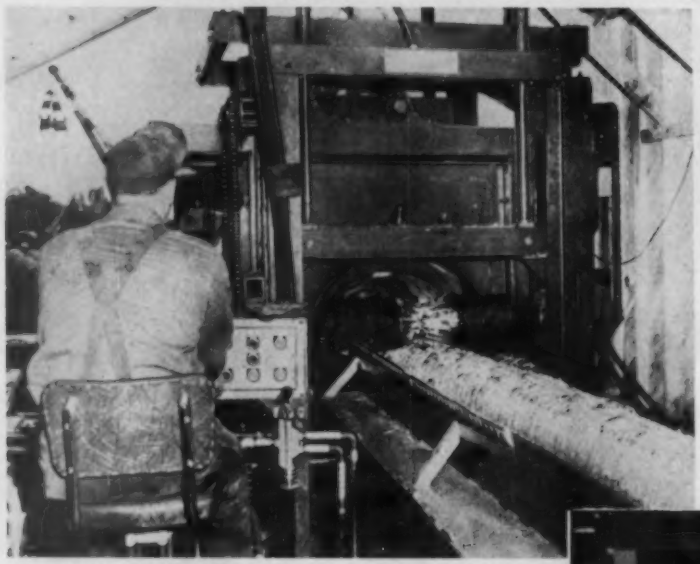
LINK-BELT

ROLLER CHAIN & SPROCKETS

14,844

LINK-BELT COMPANY: To Serve Industry There Are Link-Belt Plants, Sales Offices and Factory Branch Stores at San Francisco 24, Los Angeles 22 (Montebello), Seattle 4. Sales Offices and Factory Branch Stores at Portland 10, Spokane 10, Salt Lake City 1. Stock Carrying Distributors in Principal Areas.

A MULLIS LOG SKINNER IS NOW IN OPERATION IN THE PACIFIC NORTHWEST!



Notice the clean look of this log on the outfeed side of the **MULLIS LOG SKINNER.** Push-button operation gives operator full control of every phase of debarking.

You Will Want To See This Revolutionary Log - Skinner Working at Orofino, Idaho!

The 36-inch MULLIS LOG SKINNER shown in the photograph is now in operation at the Konkolville Lumber Company at Orofino, skinning (barking) white pine, bull pine and red fir logs, reports Andrew Konkol, owner.

Compare These Features!

- **Available in 30", 36", 42" and 50" capacity; 60" and larger on special order.**
- **Debarks any log down to 4" diameter, from 8' length to tree length.**
- **Removes bark, regardless of knots or deformities.**
- **Welded-steel, rotating air reservoir with constant pressure actuates skinning tools.**
- **Automatic control available at extra cost.**

Air pressure maintains a predetermined, constant tool pressure and is never exhausted; only a small amount of air is replenished daily. The four self-operating, askew-angle skinning arms automatically open for any size log. In this unusual design, not only is the original cost less but maintenance costs, including debarking tools, are also much lower than some other machines. Powered top and bottom hydraulic hold down rolls on both infeed and outfeed.

Crooked logs, deformities... it takes them in stride!

- **Bearings sealed for life—no costly maintenance required.**
- **Infeed and outfeed controlled separately, allowing for independent forward, reverse, or synchronized movement of logs.**
- **40 H.P., 3 phase, 220/440 V., 1765 R.P.M. motor powers debarking ring on 30" size.**

Northern California Representative:
FRED E. BARNETT CO.
San Francisco • Sacramento • Ukiah
Eureka • Klamath Falls

Representative for Western Washington; and Okanogan, Chelan, Yakima, Klickitat Counties:

MILL EQUIPMENT, INC.
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Representative for Montana, Idaho Panhandle, Eastern Washington:

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L-M EQUIPMENT COMPANY — THE HOUSE OF CHAIN SAWS

Western Headquarters for

CARL W. MULLIS
ENGINEERING & MANUFACTURING CO., INC.
LANCASTER, S. C.

Consult us about the L-M Package Plan, combining the Mullis Log Skinner, Chipper (with or without high pressure blower and screen), and financing assistance.

SERVICE INSTALLATION

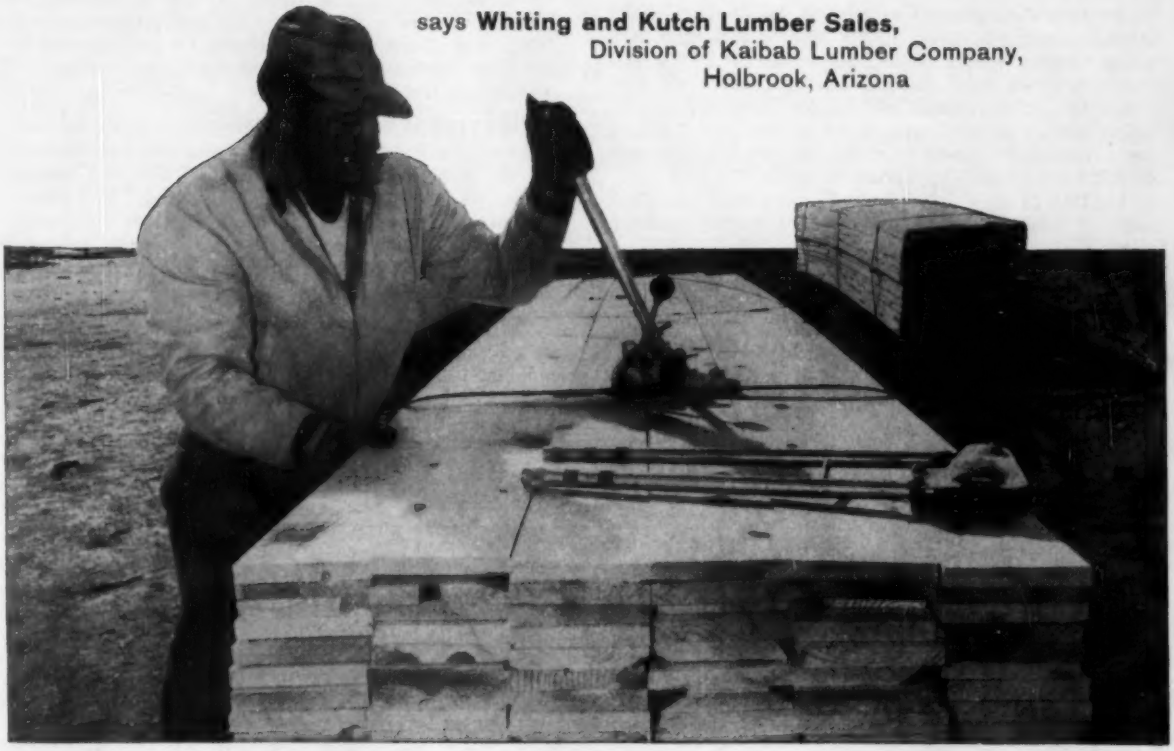
8705 S.E. 13th Ave. Portland 2, Oregon

P.O. Box 4681 Phone: BE 5-3146

With USS Gerrard equipment . . .

"We get unequalled strapping service,"

says **Whiting and Kutch Lumber Sales,**
Division of Kaibab Lumber Company,
Holbrook, Arizona



The Whiting and Kutch Division produces 22,000,000 board feet of lumber a year, and flat steel strapping goes around every bundle of lumber in the plant. Here's the kind of service they've received from USS Gerrard equipment:

With a Gerrard Model 40 Stretcher and Model 42 Sealer it takes only two to three minutes for one man to strap a bundle of 2,500 board feet of lumber. Thanks to the self-contained Gerrard equipment, the men no longer have to carry three separate tools for stretching, cutting and sealing. Now it takes only one hour for two men to strap a flatcar load, and the company saves approximately 20 minutes on each strapping job. The amount of body shifting they have to do in these operations is reduced to a minimum. In addition, the built-in cutter on Model 40 eliminates the protruding scrap ends that are both shoddy-looking and dangerous.

This is typical of the service USS Gerrard Steel Strapping equipment can offer to *you*. Gerrard equipment can be adapted to meet any of your packaging needs, or solve any of your packaging-tying problems. General Offices: Chicago, Illinois.

USS and Gerrard are registered trademarks

Gerrard Steel Strapping Dept.
U. S. Steel Supply
Division of
United States Steel

USS

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Without obligation, please send me the new 36-page Gerrard Blue Book of Packaging.

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Company .....

Address .....

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INDUSTRY TRENDS

DEMAND FOR LUMBER in the Western Pine region showed little more than the normal seasonal increase in the second quarter, but did not strengthen as much as producers would have like, the Western Pine Association reports. However, basic conditions seem to be definitely on the mend.

Western Pine production of 1.84 billion feet in the second quarter was down 12.3% from a year ago. Bad spring weather was a factor. Shipments of 1.93 billion feet were down 8.3% from a year ago. Stocks of 1.88 billion feet at the end of the quarter compared to 1.97 billion feet at the beginning of the quarter and 2 billion feet a year ago. Though stocks have been reduced, they are still fully adequate for current demand.

Looking to the third quarter, Western Pine sees shipments of 2 billion feet, about 5% below the third quarter of 1957.

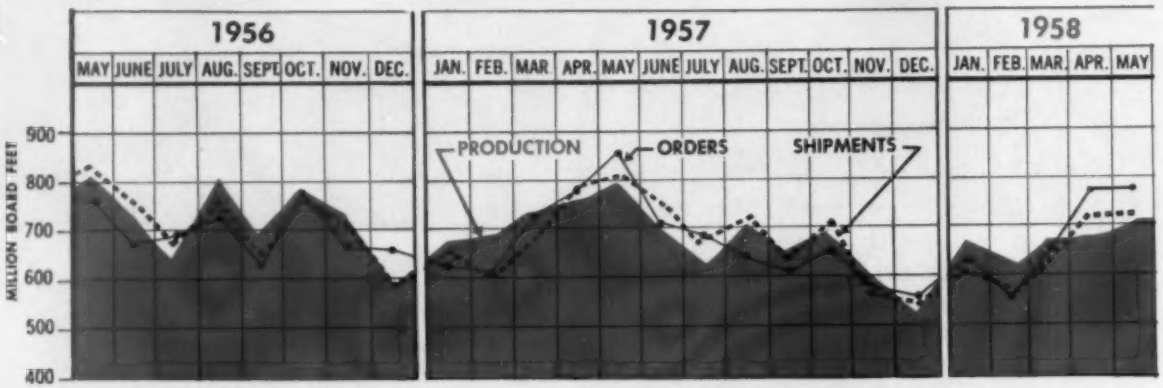
SIGNS OF RECOVERY in lumber production are pointed out by the National Lumber Manufacturers Association. While lumber output during the first three months of 1957 . . . 7.3 billion feet . . . was down an estimated 10% from year-ago levels, figures for the second quarter are expected to show a somewhat smaller percentage of decline. Production during the second half of 1958 could boost the year's total to a point where it equals, or even exceeds by 2% to 3% the 1957 level of 33.4 billion feet.

The trend of housing will be a key item. The NLMA notes that lumber production in the first quarter of this year is only a shade below output in the same months of 1950. As home building moved into high gear during the middle and closing months of 1950 and went on to establish a new all-time record of nearly 1.4 million units for the year, lumber production rolled to a postwar peak of 38.9 billion feet.

WATERBORNE LUMBER movement from the west coast of North America in May totaled 241.7 million feet, off the pace of the previous month. British Columbia moved 61.5 million feet in the export trade, 35.7 million feet of which went to the United Kingdom . . . nearly identical to a month earlier. B. C.'s domestic total was 49.7 million feet. Western United States' export total was 20.7 million feet, domestic, 109.8 million feet.

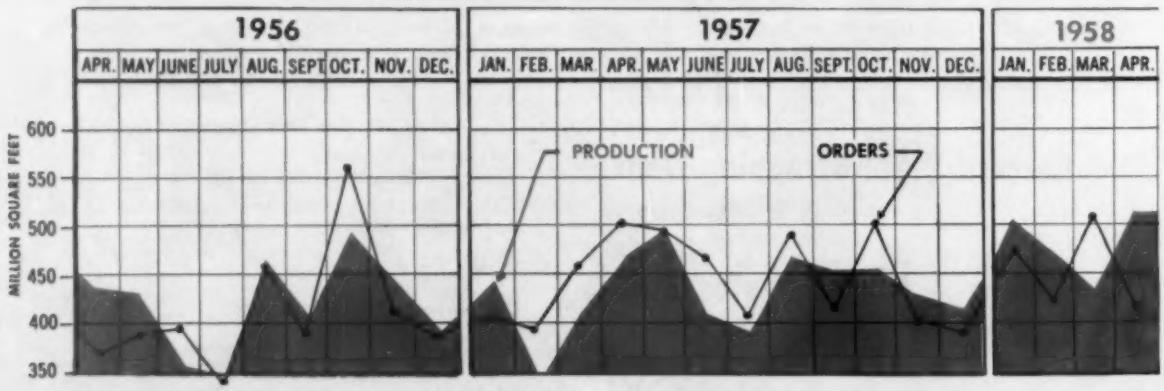
WOODEN BOX SHIPMENTS from the Pacific Northwest continue about 4% behind 1957 at the end of four months: 102.7 million feet vs. 107.3 million feet. In May, shipments from 38 identical plants were off only .3% from a year ago.

DOUGLAS FIR



DOUGLAS FIR REGION lumber production for five months totals 3.4 billion feet. Orders total 3.4 billion feet, shipments 3.2 billion feet. Unfilled orders at the end of five months total 632 million feet, compared to 675 million feet at the same time in 1957.

DOUGLAS FIR PLYWOOD

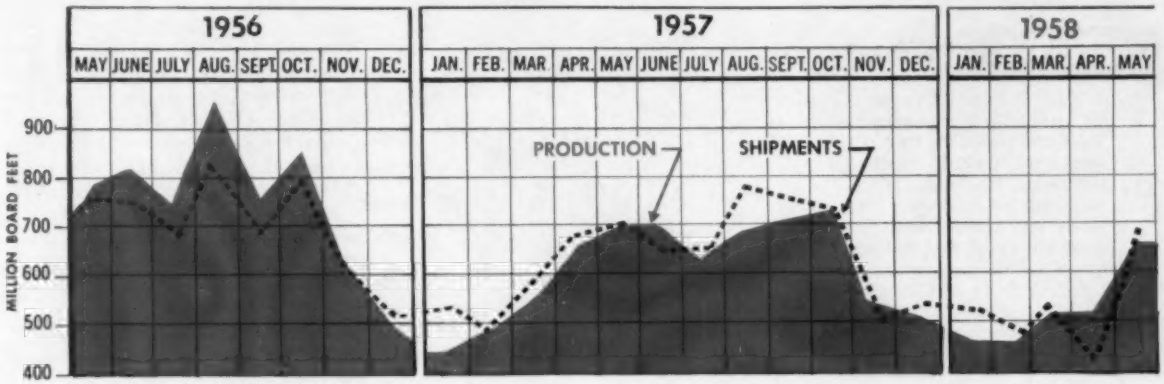


DOUGLAS FIR PLYWOOD statistics, compiled by the Douglas Fir Plywood Association, are not available for May or June. The association announced early in May that its Barometer, issued weekly, would be suspended for a minimum of four weeks.

LUMBER PRODUCTION in the first quarter of 1958 is off 5.1% from the fourth quarter, 1957, and 9.5% from the first quarter of 1957. Output continues at about the same level as shipments and new orders. Unfilled orders gained 3% in the first quarter, but are still 9% behind a year ago. Average wholesale prices edged slightly downward in the beginning of the quarter, but leveled off from March to April. Other first quarter figures show shipments down 6% from a year ago and orders from 9.4% from the first quarter of 1957.

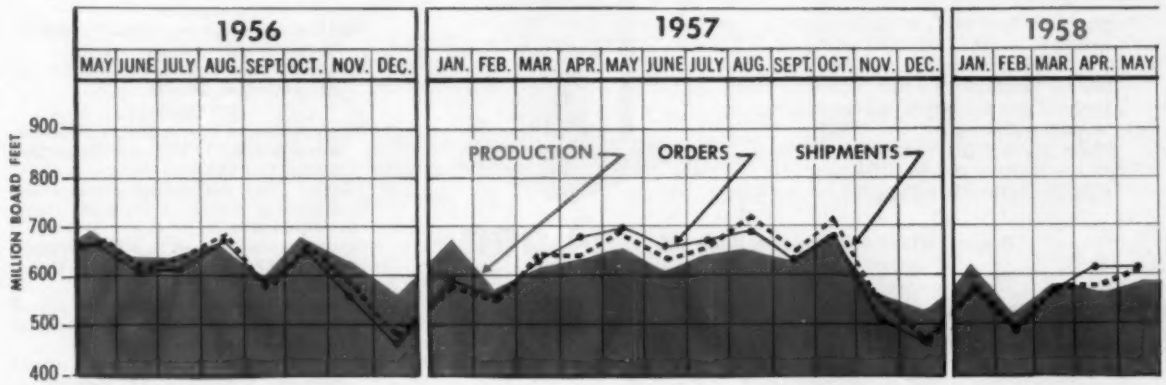
SOFTWOOD PLYWOOD PICKUP. Several major softwood plywood producers have increased their prices on the index grade to $72, the second jump in a month. Sheathing grades also continue firm, with some listings of $108 on ⅜-inch, an increase of $20 over the price prevalent a short time ago. The softwood plywood market is continuing firm with marked improvement in demand. Another factor has been the production curtailment resulting from traditional and general plant shutdowns for vacations during July.

WESTERN PINE



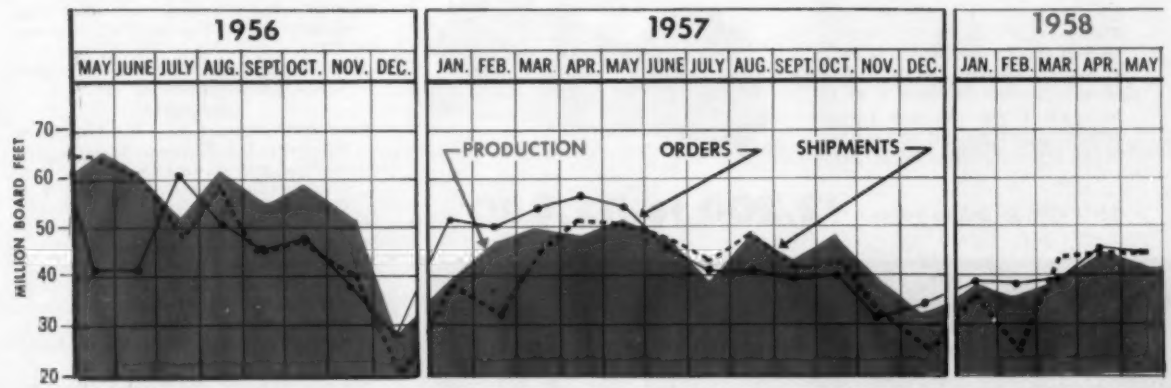
WESTERN PINE production for five months totals 2.7 billion feet, compared to 2.9 billion feet a year ago. Shipments total 2.8 billion feet, compared to 3 billion feet a year ago. Gross stocks on May 31 of 1.87 billion feet compare to 1.97 billion feet a year ago.

SOUTHERN PINE



SOUTHERN PINE production for five months totals 2.85 billion feet. Orders total 2.85 billion feet, shipments 2.8 billion feet. Unfilled orders total 191 million feet, up 4% from the previous month but 1% below a year ago. Gross stocks are 1.96 billion feet.

REDWOOD



REDWOOD production for the five months totals 194 million feet, compared to 231.9 million feet a year ago. Shipments total 192 million feet, orders 202.9 million feet. Orders on hand on May 31 totaled 59 million feet. Stocks on hand totaled 394 million feet.

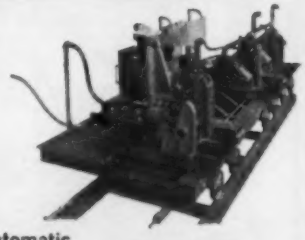
Improve Your Sawmill UNIT BY UNIT

If you take pride in a sawmill that's deluxe equipped to produce deluxe quality and profits, then you want an ENTERPRISE completely engineered sawmill.

Here's the way to own an ENTERPRISE deluxe mill painlessly: buy it unit by unit.

UNIT 1 Automatic Carriages

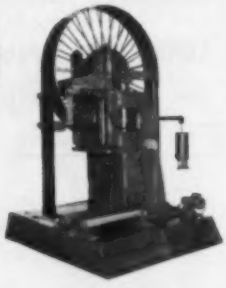
ENTERPRISE Automatic Carriages are designed for operators who know and appreciate the finest. They're the industry's best values; in use all over the world; fast-moving, flexible, accurate, easily controlled, and really built! They handle both hard and soft woods, are completely air-operated, have push-button control of knee taper, dogs, set works, flippers. Write for ENTERPRISE Bulletin 201.



Deluxe ENTERPRISE Automatic Carriage, in your choice of all-aluminum or wood-and-steel **$19,000**

UNIT 2 Band Mills

Super-rigid, super-sensitive and fast-reacting, super trouble-free—ENTERPRISE 54-in. and 6-ft. Band Mill Headrigs are built for mills that won't settle for less than the best. Combined with ENTERPRISE fast-operating log carriages and time-proven ENTERPRISE Double Twin-Disc Clutch Feed Works, you've got the band mill that beats the field. Write for ENTERPRISE Bulletin 207.

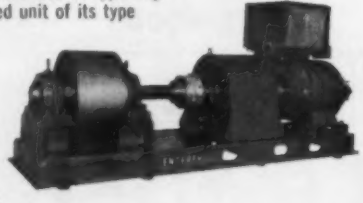


Deluxe ENTERPRISE Six-Foot Band Mill **$14,000**

UNIT 3 Carriage Feeds

(Friction, Shot-Gun, Hydraulic or Electric)

Whether you choose ENTERPRISE Twin Disc Clutch Feeds or the special WESTINGHOUSE-ENTERPRISE Electric Geared-Type Log Carriage Drive, you'll own the latest designed unit of its type on the market. Standard ENTERPRISE band mill feeds consist of a machined cable drum (roller bearing mounted) driven through bevel gearing from a pair of twin disc clutches. The special electric drive (illustrated) consists of a 35 hp motor with blower, coupled to a speed reducer, all unit-mounted on a machined welded steel base. Write for complete data.



ENTERPRISE Deluxe Feeds **$2,200 to $12,000**

THE ENTERPRISE COMPANY
Columbiana, Ohio, U.S.A.

Wood Products Engineering Department Scheduled

State University College of Forestry at Syracuse University has established a wood products engineering department which consolidates resources of the college's basic and applied timber science departments into a single organization having a strong engineering character to its instructions, service and research.

Resources of the new department include the 14 teaching and research men staffing the forest utilization and wood technology departments. They also include over two-thirds of the $4 million worth of specially-designed facilities and scientific and technical equipment comprising the new Hugh P. Baker Wood Products laboratory. This includes an electron microscope, high radio frequency equipment, ultrasonic sound apparatus, a wide range of testing instruments and complete pilot plant processing facilities.

Dr. Eric A. Anderson, professor of wood technology, will be chairman of the department.

Industry Meetings

AUGUST

Western Nurserymen, annual meeting, August 21-22, Olympia, Wash.

Northern Forestry Congress, August 23-30, Stockholm, Sweden.

SEPTEMBER

North American Forest Soils Conference, September 8-11, Michigan State University, East Lansing, Mich.

Western Pine Association, semi-annual, September 10-12, Multnomah Hotel, Portland, Ore.

Concatenated Order of Hoo Hoo, September 14-17, Sahara Hotel, Las Vegas, Nevada.

Northwest Hardwood Association, annual meeting, September 26-27, Congress Hotel, Portland, Ore.

Society of American Foresters, national meeting, September 29 - October 2, Hotel Utah, Salt Lake City, Utah.

OCTOBER

Architectural Woodwork Institute, October 14-17, LaSalle Hotel, Chicago, Ill.

Insulation Board Institute, annual meeting, October 21-23, Seaview Club, Absecon, N. J.

American Forestry Association, October 27-30, Tucson, Arizona.

NOVEMBER

Hardboard Association, annual meeting, November 5-6, Chicago, Ill.

Forest Products Research Society, Carolina-Chesapeake section, November 6-7, Charlotte, N. C.

Pacific Logging Congress, November 10-12, Multnomah Hotel, Portland, Ore.

Governor's Safety Conference (Washington), November 13-14, Olympia, Wash.

Southern Sash & Door Jobbers Association, winter meeting, November 21 - 23, Americana Hotel, Miami Beach, Fla.

DECEMBER

Western Forestry and Conservation Association, December 10-12, Palace Hotel, San Francisco, Calif.

Forest access road aggregates reduced to 3-in. minus in-place at up to 500 cu. yds. per hr. Here's how

SOL DUC RIVER, WASHINGTON. Up here in the rugged Olympic Mountains, a rugged machine captured the cost-saving imaginations of 40 logging operators; the BROS Preparator reduced glacial oversize rock materials to 3 in. minus sizes at production rates up to 500 cu. yds. per hour.

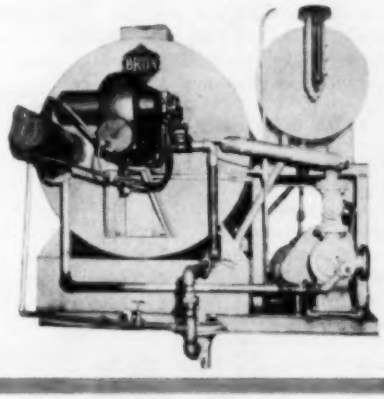
Keeping careful records, in six weeks operating time, the costs of Preparator-run aggregates for forest access roads are substantially less than present methods.

Widely used in airfield and highway base construction jobs, the BROS Preparator employs 22 free-swinging hammers on a common shaft. These alloy steel hammers rotate at high speeds, reducing oversize materials by impact. Hammer life on logging road operations is averaging 22 to 26 hours wear before replacement. Get complete information on the BROS Preparator from your nearest BROS Distributor listed below.

Pulp and Paper producers... indirect heat up to 500° F

With industry rapidly converting to mineral oil mediums for heat transfer involving temperatures to 500° F., you'll want to examine the BROS Hi-Heat Oil Heater for heating, cooking, synthesis and processing operations in your plants. Controlled temperatures are quickly obtained. Five standard models with hourly BTU output range from 850,000 to 3,650,000. Larger units also available. Operates at pressures below 15 psi.

Units operate on widely available crude or bunker fuel oils. Fully automatic, electrically operated; equipped with all safety controls. Write for complete engineering information on this product.



See these BROS DEALERS

WASHINGTON
Totem Equipment Co., Seattle
Loggers & Contractors Machinery Co. Portland, Oregon

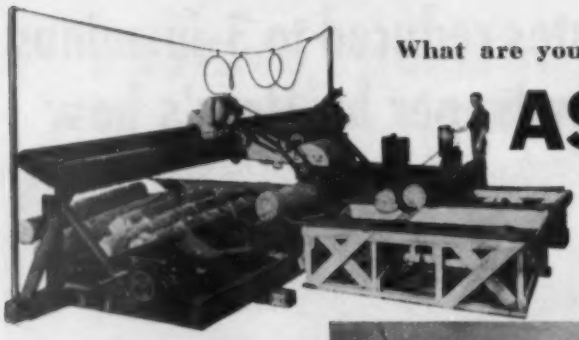
OREGON
Loggers & Contractors Machinery Co. Eugene and Portland

CALIFORNIA
Crook Company, Los Angeles
Blakemore Equip. Co., Oakland

IDAHO
Western Equipment Co., Boise, Twin Falls, Idaho Falls, Pocatello, Burley

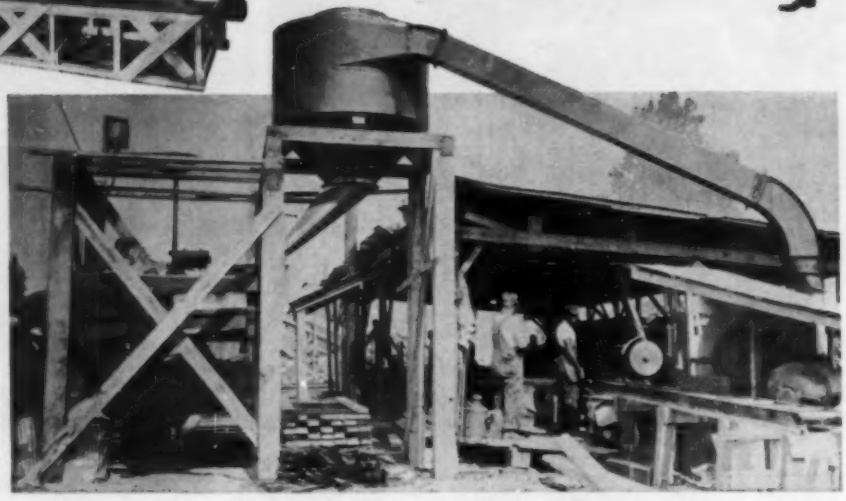
MONTANA
Western Const. Equip. Co.
Billings & Great Falls
Northwestern Equip. Co., Minot, No. Dakota

WYOMING
Keremi Tractor & Equip. Co., Cheyenne
Western Const. Equip. Co., Billings, Montana



What are you getting from your scrap . . .

ASH or CASH?



CHIPPING FOR A PROFIT—

Molpus Lumber Company, Philadelphia, Mississippi, cutting from 2 to 2½ MBF of lumber per hour, recently installed a woodwaste utilization setup consisting of Soderhamn DC-6 Log Barker, 48" Horizontal Chipper, and CS-20 Chip Screen. The installation was made at total cost of less than $27,000 excluding high pressure blower system to blow chips 620 ft. to open type gondola car.

Mr. Molpus says of this installation, "We believe this is the lowest cost barker-chipper-screen installation on the market, and it should pay for itself within one and one-half to two years."

IF you're burning waste — slabs, edgings, trimmings — you're missing out on real profits. Here's a minimum-investment installation that will make you

$13,578 to $55,515 profits annually — depending on size of your mill!

A woodwaste utilization installation is no longer just for the "big boys" — this new Soderhamn combination will put you "in the chips!" Efficient, clean barking and chipping . . . accurate, dependable screening — all to most rigid pulp mills' specifications.

TOTAL INVESTMENT LESS THAN $25,000

This is actually the lowest price heavy duty installation on the market. Three precision Soderhamn machines, designed for long life and economical, dependable operation . . . minimum labor, minimum horsepower requirements, minimum maintenance. You can't go wrong with Soderhamn — the line that is setting new standards for the industry.

- *Soderhamn also makes the lowest cost rotor barker on the market, considering installation and labor costs.*

NEW DC-6 LOG BARKER. Will handle efficiently logs from 5" to 36" diam., 6' to 22' long. Production up to 45,000 bd. ft. (Doyle scale) per shift may be reached under ideal conditions, although installation is profitable for mills cutting as low as 7,000 bd. ft. a day.

Interchangeable heads — flail scraper, abrader, and planer types — make it easy to meet all bark specifications. No conveyors needed — skids or live decks may be used for both infeed and outfeed; logs are fed sideways into the barker, and hydraulic kickers discharge barked logs to the rear. Kickers properly spaced to insure support for random length logs.

All movements controlled from one simple station, including start-stop buttons for all motors. Heavier construction than any other low-cost barker on the market. Weight, approximately 12,000 lbs.; cost, complete with all motors, $8,500.

Individual literature available.

48" HORIZONTAL CHIPPER. Adaptable to ground level mill, so no elevated conveyor required. Furnished with 3 high chrome alloy knives and special Soderhamn anvil knife of new, heavier design, affording four usable hard-faced cutting edges. Knives bolt into disc. Chip size readily altered. Average production, 20 cords per hour — more than ample for one barker and screen; weight, approximately 6000 lbs.; HP required, 75-125 depending on conditions; cost, $6,900 plus motor. (Motor can be quoted separately.)

Individual literature available.

CS-20 HORIZONTAL ROTATING CHIP SCREEN. Advanced design Chip Screen insuring quality production of chips — a *must* in today's market conditions. Delivers uniform chips, free of splinters and sawdust. No vertical movement — oversize chips and splinters cannot jump through top screen plate as on conventional chip screen. Chips, sawdust and oversize pieces discharged separately. Requires no ground foundation — suspended from cyclone supporting structure. Average production, 5 cords per hr.; weight, approx. 1600 lbs.; cost complete with 2 HP 1800 RPM motor — $2,200.

Individual literature available.

SODERHAMN MACHINE MANUFACTURING COMPANY

Talladega, Alabama

West Coast: Suite 3, 9442 S.W. Barbur Boulevard, Portland, Oregon.

East Canadian Representatives: Forano Limited, Montreal, Canada.

DID YOU GET YOUR COPY?

This brochure describes this 3-machine installation and tells how to figure your profits in advance . . . how to get in the chip business. Write for it now!

SODERHAMN — FIRST NAME IN WOODWASTE UTILIZATION EQUIPMENT

Want to get there Quicker, Safer, at Lower Cost?

Eaton 2-Speed Axles Will Do It!

Eaton 2-Speed Axle trucks make quicker, full-load trips—with no sacrifice of power when it's needed to pull out of the tough spots. But they do more than save time; they save money, too. With double the conventional number of gear ratios right at their finger tips, drivers use the *right* gear ratio for every operating condition. This lets engines operate in their most efficient and economical speed range; stress and wear are reduced right down the line from the engine to the axle itself. Operating and maintenance costs are cut to the bone. And through improved maneuverability and reduced driver fatigue, Eaton 2-Speed Axle trucks make not only *quicker* trips but *safer* ones. They haul more at lower cost per mile, last longer, and are worth more when traded in.

More than Two Million Eaton Axles in Trucks Today. For complete information, see your truck dealer.

EATON — AXLE DIVISION — MANUFACTURING COMPANY
CLEVELAND, OHIO

PRODUCTS: Engine Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Jet Engine Parts • Hydraulic Pumps Motor Truck Axles • Permanent Mold Gray Iron Castings • Forgings • Heater-Defroster Units • Automotive Air Conditioning Fastening Devices • Cold Drawn Steel • Stampings • Gears • Leaf and Coil Springs • Dynamatic Drives, Brakes, Dynamometers

PICK OFF THE PEAKER

PART THE LOAD

PICK UP THE REST

Now! Unload Any Size Off-Highway Log Load With 22-Ton Stacker

Select Logs for Removal With New LeTourneau Log Stacker

Now the fabulous LeTourneau Log Stacker is even more versatile! If your mill gets logs on off-highway trucks — say 100 tons to a load — this new Stacker will take them off in 20-ton bites, carry them wherever you want them to go, and put them down as precisely as you'd stow your favorite meerschaum.

You can do this because we've put a *powered* "knuckle" in the steel tusks that encircle and firmly clamp whatever load the Stacker tackles. Forks and tusks now act more than ever like a giant steel hand. Working together they pick up a single log, roll it to the back of the forks, and move in for more. Taking off giant logs "as-they-come," the Stacker needs only minutes to unload the biggest loads that come in and send the truck on its way.

Electric Power Does The Job

The exclusive LeTourneau system of electric power and control makes handling big loads — whether a few giant logs, or a truckload of small ones — as easy as flicking a switch. Power is applied at the point of work by individual electric motors. Tractive power is electric too, with each wheel having its own DC motor and direct-geared drive mounted inside its rim. This smooth-running power system has no clutch, no transmission — just controlled electric power for carrying big loads quickly to all parts of the yard.

LET
R.G. LETOURNEAU INC
LOGGING EQUIPMENT DIVISION
2548 South MacArthur, Longview, Texas

PICK UP FREE OF BARK

Serves As Basic Yard Machine For Hollow Tree Lumber Co.

The Ukiah, California, mill of Hollow Tree Lumber Co. (where these pictures were made) cuts redwood exclusively, and receives most of its logs on off-highway trucks. Their jointed-tusk Stacker unloads all logs received, and in addition works the decks, feeds the mill, and spreads logs for peeling and bucking.

Mr. Lee Vostmyer, vice-president in charge of production, reports that after getting the Stacker, Hollow Tree was able to retire two heavy cranes and a skyline system. Five men were made available for duty elsewhere.

This Stacker offers other advantages peculiar to the Hollow Tree operation. They formerly used a smaller lift truck to pick up hand-peeled logs, and required an extra handling to get rid of all the bark. Now they get a "clean" pickup by using the Stacker's powered fingers to roll the logs onto the forks. This same "roll-on" action gives better loading at the decks.

WORK THE DECK

More Lumber Per Log

"We now get more lumber out of our logs," says Mr. Vostmyer, "because handling them with this machine has stopped damage from tong holes and breakage. Its ability to roll logs on the forks also saves a lot of saw trouble because we don't have to grind dirt and rock into the logs in order to pick them up."

See Them In Action

Your local LeTourneau distributor will be glad to show you a Stacker at work. Or mail the coupon below for more information.

FEED THE MILL

R. G. LeTOURNEAU, INC., 2548 South MacArthur, Longview, Texas

- ☐ Send me literature describing the Log Stacker.
- ☐ Arrange for me to see a film showing the Stacker in action.
- ☐ I'd like an analysis of my mill operation to see how a Stacker might cut my operating costs.

Name and Title_____

Company_____

Address_____ City, State_____

STANDARD ENGINEER'S FIELD REPORT

PRODUCT **RPM DELO OIL**

FIRM **SIMPSON REDWOOD CO.**
Arcata, Calif.

World's biggest* logging truck uses RPM DELO Oil

Largest *single axle drive logging truck in existence, this custom built Model 802 Kenworth hauls 60-ton payloads at Simpson Redwood Co.'s Klamath operation. Truck went into service in early 1956; has used RPM DELO Oil exclusively. At a regularly scheduled overhaul after using 24,000 gallons of fuel, its 335 hp Cummins engine was unusually clean. There was no measurable wear on pistons, liners, bearings or crankshaft. Truck works 12 hours daily, 5 days a week, hauling loads averaging 12,000 bd. ft. over two mountain ranges. RPM DELO Oil is also used in 25-ton LeTourneau log stacker unloading truck (above).

Kenworths and Peterbilts in 10-truck highway fleet hauling lumber and green veneer are on the road 23 hours a day, 5 days a week. A very thorough preventive maintenance program holds mechanical downtime to only 0.8% on this fleet, though each truck averages 140,000 miles a year. Firm's 7 highway logging trucks work 12 hours daily . . . have an equally good record. Simpson Redwood Co. reports it has used RPM DELO Oil exclusively since 1954 . . . has never had a stuck ring or valve in any of its equipment. Altogether this oil is used in more than 80 diesel engines at Klamath. RPM DELO Oil is also used at Simpson's Korbel operation which is being developed to comparable size.

Why RPM DELO Oils reduce wear—prolong engine life

- Oil stays on engine parts—hot or cold, running or idle
- Anti-oxidant resists lacquer formation
- Detergent keeps parts clean
- Special compounds prevent corrosion of bearing metals
- Inhibitor resists crankcase foaming

For More Information contact your Standard Engineer or Representative, or write 225 Bush Street, San Francisco 20, California.

LUBRICATING OILS RPM DELO

TRADEMARKS "RPM DELO" AND CHEVRON DESIGN REG. U.S. PAT. OFF.

STANDARD OIL COMPANY OF CALIFORNIA

Ind. 263-R

EDITOR'S PAGE

AT MID-YEAR: The Upturn

THERE IS NEW AND WELL-FOUNDED OPTIMISM within the forest products industry. Among the first to be touched by recession, it is also one of the first industries to have leveled off and sensed an upward trend. The accumulative effect of modernizing, better merchandising and new product development has presented a challenge that is drawing real and enthusiastic attention.

MANUFACTURERS OF WOOD PRODUCTS are becoming long-range planners, for the most part. They recognize that our rapidly increasing population—now experiencing the most rapid growth in our nation's history—is a built-in accelerator. With 10 million people to be added to our working forces in the next seven years and a 75% increase in college enrollment expected within the same time, it spells more homes, more schools, churches and commercial buildings.

THEY ARE GETTING READY for this period now, searching out new ways of utilization, introducing a new array of more attractive building materials, presenting better and more economical products. As one lumberman expressed it: "The long-range planner has nothing to fear but his own ability to plan ahead fast enough to keep up with demands of our surging economy. What we are doing right now will determine whether or not we will be able to keep up with the gradually increasing demands from this day on out."

WHILE MERGERS CONTINUE, though in lessening number, to consolidate timberlands and provide capital for more expansion and product development—at the same time the medium and smaller operator is learning that he, too, can do the same thing within his productive and financial capacity—and many are doing it. Surprising to some will be the strides in modernization and product development coming from smaller operations where there are yet many men with imagination and confidence. Transfusions are also coming from the vigor of young men reaching management capacities.

WHAT IS ACTUALLY GOING ON in the forest products industry is far more indicative of the tempo of conditions than a book full of predictions. When the clouds have cleared, this will have been a revolutionary era for the wood products industries. Going on now is a dynamic movement of modernization—aptly expressed by one manufacturer's statement: "We are doing what we have to do. We are putting in kilns, end branding, packaging, prefinishing, improving our mill and materials handling systems." And this is typical. Why are they doing it? To strengthen the profit making factors by increasing the degree of automation, reducing overhead in proportion to greater sales volume, increasing expenditures for technical and market development, getting better communications and obtaining more effective personnel cooperation.

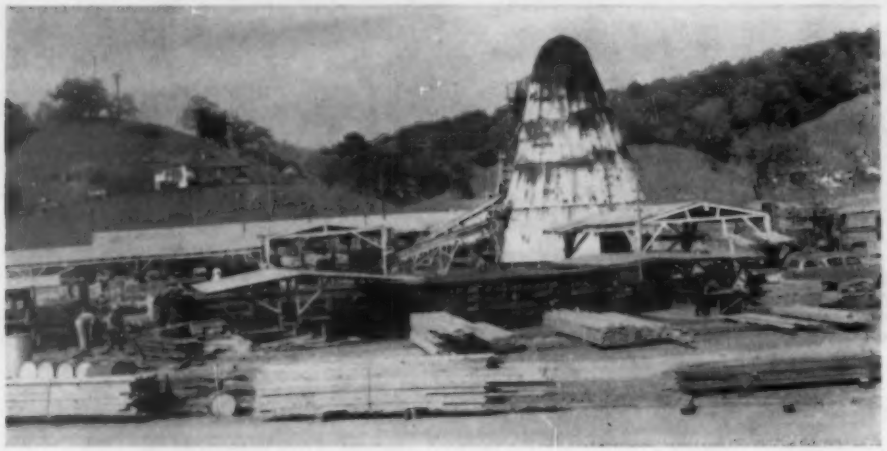
NEW PRODUCT DEVELOPMENT in the forest products industries is heading for an all time record. Never within its history, have there been so many companies working on so many new products at one time—that will bring new economies in construction and more attractive and beautiful building materials to the construction markets. They are "getting on the ball," these so-called conservative forest products manufacturers, and finding out what the consumer wants and are preparing to give it to him. Their inventiveness is little short of amazing.

WE ARE BEGINNING TO SEE new component structures, many beautiful factory finishes for both interior and exterior uses, new laminations, combinations of all types of forest products, new and interesting surfaces and some entirely new products. Integrated product use, that is the combining of lumber and all types of wood panels and of these products with such things as plastic and metals, is fast developing. Research is becoming a practical word in the manufacturer's vocabulary.

MISSING THE BOAT IN A BIG WAY are some equipment and machinery manufacturers who have not yet discovered what is going on within their own markets—have reduced their selling and promotional efforts in a time that calls for harder selling. Surveys conducted by THE LUMBERMAN indicate that there will be over $500 million spent on modernization and new capital investment in the forest products fields during 1958. This does not sound like an inactive market. These manufacturers of forest products are seeking new equipment to produce better quality products—to bring new economies into their operations— and for new equipment to produce new products. The trouble is that though there are many types of equipment on the market today, many wood products manufacturers are having to develop their own equipment simply because they do not know where to buy the component. This will mean future new equipment manufacturers—loss of markets for others. It's going on now and it's time for a realistic evaluation and real salesmanship.

JUST FOR INSTANCE: There was heavy buying of equipment at the American Woodworking Machinery and Equipment Show at Winston-Salem, North Carolina in May; the new mill of Ozan Lumber Co., Prescott, Ark.;

(Continued on page 70)



PRE-CUT LUMBER operation is centered here. Separation of buildings, and thus separation of departments, is evident. Pigeon-hole-like structure at right middleground is "file" storage for templates used to mark plates for various house plans. Locations of all studs, windows, etc. are clearly marked.

CUTTING-TO-SIZE for the BUILDER

this mill produces 3 million feet per month through departmentalized system

SPECIFIED PULLED-TO-ORDER lumber is 90% of the production of Idaco Lumber Co. at Healdsburg, California, the state's largest producer of pre-cut lumber. The balance is random lengths.

Builders are the company's primary customers and most of the production is shipped as complete houses. However, Idaco also produces pre-cut lumber for construction of commercial and multiple-unit residential structures.

Idaco breaks the house down into its component parts and organizes production accordingly. Because of the type operation, a simple straight-line production flow is not feasible.

Manager E. Jeffreys, in effect, has seven individual production lines. These are: (1) rafter, (2) ceiling joist, (3) floor joist, (4) plates, (5) timbers, (6) basic unit (sidewalls and framing), (7) yard and random.

At any one time, any of these departments may be working on house components for a number of builders. Similarly, there may be purchased rough and surfaced lumber on the way into the plant, finished packages standing or loaded, awaiting the builders' OK to move them out or trucks on the way to building sites to deliver packaged loads. In addition, there is on hand Idaco's own inventory of from 3 to 5 million feet.

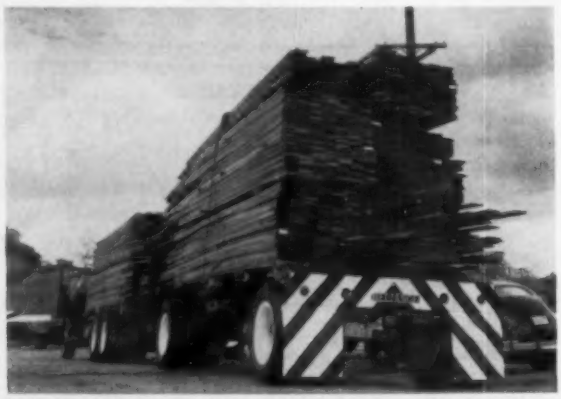
Scheduling becomes the major problem to keep under control. Mr. Jeffreys isolates this problem by assigning full responsibility for scheduling to the plant superintendent. He, in turn, depends on the office manager for coordination between production and sales. The sales manager has three sales engineers in the field.

The company has turned out components for more than 10,000 homes. Douglas fir accounts for approximately 80% of the production. The balance is redwood.

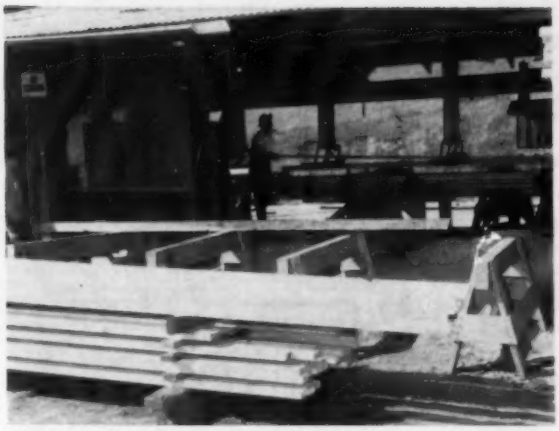
TRUCKING EQUIPMENT is based at a depot at nearby Santa Rosa. Two shifts of truck drivers are employed, for pickup of purchased lumber as well as delivery of packaged houses.

Purchased lumber is hauled from as far as Eureka, Calif. Deliveries of packaged lumber are 95% within California and of this total, 90% is in the northern California area: San

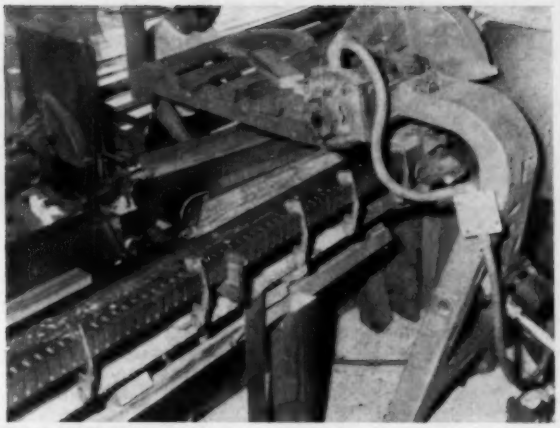
TYPICAL LOAD of house components. Carpenters receive packages of marked lumber which has been stacked at Idaco in rotation of use.



SINGLE SPECIES load leaving Healdsburg plant on Peterbilt-Reliance rig has 22,210 feet of redwood. Driver may haul lumber on return.



RAFTER DEPARTMENT, where shop-built machine turns out common rafters for 15 houses in eight hours.



DUAL ASSEMBLY of Irvington air trim chop saws. These are hi-speed units, automatic, with changeable metal stops. Saws are 16" size.

PLANER UNIT here is located behind burner in photo opposite. Resaw is partially visible beyond planer.

PRINCIPAL EQUIPMENT

Planer: Newman 512
Resaw: McDonough 54"
Planer breakdown and feed: Idaco
Air trim chop saws: Irvington, two 16"
Radial arm saws: 12, Wilson, Comet and DeWalt, 14" to 20"
Trucks: Peterbilt, Cummins diesel
Trailers: Reliance
Carrier: Hyster
Loader: Hough
Stackers: Ross and Gerlinger
Strapping: Signode
Double end trimmers: two, shop-built
Rafter machine: Idaco
Radio: General Electric

TIMBER DEPARTMENT operators cutting 6x6's on DeWalt saw. Beyond, ceiling joists being pulled and stacked.

Francisco, Oakland and Sacramento areas.

Trucks are equipped with General Electric radio receivers. There is communication between the Idaco plant and the company's sales office at Oakland and the trucks.

Idaco's equipment is all Peterbilt, with Cummins diesels. The trucks pull Reliance trailers.

All lumber leaving the Healdsburg operation is strapped. As part of the departmentalizing, each of the production units does its own strapping. Signode steel strapping is used.

SPECIAL PROBLEMS arise in such an operation as this. Rapid, efficient production of rafters, with several cuts involved, was one. Idaco designed its own rafter machine. The unit can make three seat and two plumb cuts at the same time. Traveling, tilting circular saws are mounted at ends of the machine and notchers below. Piece work is held down by three pressure units. Pressure results from spring-tensioned swinging arms, under which the rafters travel. Two men normally operate the machine.

A staggered shift results from the inherent problem in scheduling production. The mill operates on one shift, but not all departments operate at the same time. Last workers to leave the plant leave at 9:00 p.m.

The plant employs from 50 to 100 men, depending on the work load.

ADVANTAGES TO BUILDERS who utilize pre-cut lumber are numerous and add up to dollar savings. This applied to projects of at least three or more houses.

SAWMILL EQUIPMENT

Headrig: Idaco 60" double circular
Edger: Idaco 6x60
Gang: Marathon 12x20
Carriage: Shop-built, with E & M Electric Co. remote setworks
Trim saw and transfer tables: Idaco
Building: Soule

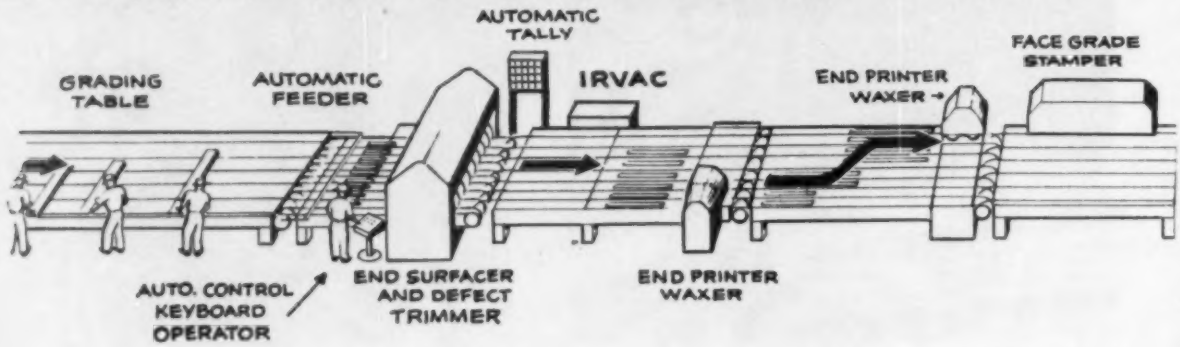
Idaco lists the advantages as:

- Stops lumber waste
- Saves labor
- Eliminates expensive inventory
- Eliminates guess estimating on lumber cost per house
- Stops expensive mis-cuts
- Eliminates advance lumber buying.
- All lumber is association graded (WCLA).

INSTALLATION OF PRE-CUT LUMBER houses by Idaco has been done in a number of overseas sites. Several thousand such packaged houses have been erected in Chile. Others have been erected in Okinawa and in Hawaii.

Idaco has been turning out pre-cut packaged houses for 10 years and from the Healdsburg plant for the past six years. [END]

FLOW CHART for Potlatch Forests, Inc., mill at Lewiston, Ida., showing the automatic operations of end surfacing, automatic tally unit, end printing and waxing and grade stamper with tipple sorting to upper and lower tables.



Practical Automation for Planing Mills

By E. W. DeKONING

President of Irvington Machine Works, Portland, Ore.

ENGINEERS in the lumber field have long been aware that oranges, walnuts, and other commercial products are sized, graded and sorted by wholly automatic machines utilizing a system of automation. To treat lumber the same, however, presents a different problem. Lumber is bulky, comes in random lengths, widths and thicknesses.

In spite of this difficulty, there is a practical system of automation for the planing mill. It saves both time and labor, increases production, and thus gives lumber a better advantage in meeting competitive markets.

Automation is simply this: A machine controlling machines. Instead of a man required at each machine in the lumber production line, one man operates one simple machine that takes over the direction of the other machines.

THE BASIS of planing mill automation is the lug chain. All the lugs are spaced an equal distance apart, so that, as each lug passes the controlling machine (the memory system) it picks up a command, directing subsequent machines what to do to the board occupying that position.

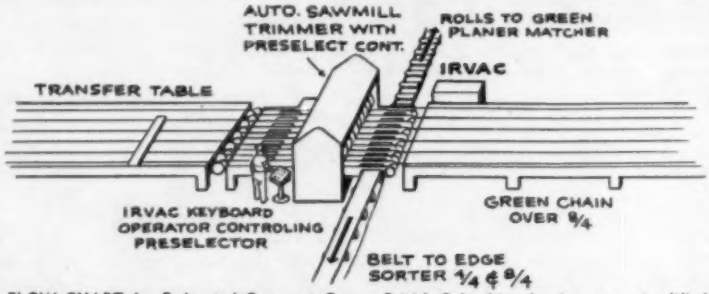
Let us outline the action by progressive steps:

(1) The memory system is present, or pre-programmed, so that all *on-grade* boards are automatically:

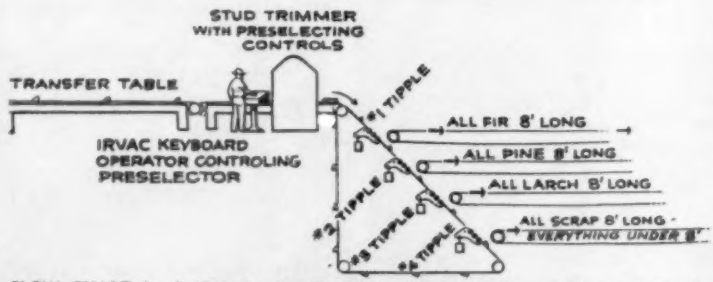
- Trimmed to 16 ft. (or other) lengths
- End-printed and waxed on both ends
- Face grade-stamped
- Directed to a proper sort

(2) It is not desired that any of these treatments be given to an off-grade board. Therefore, as an off-grade board passes the index point of the memory system, the operator depresses *one* key on his control panel nullifying the present program.

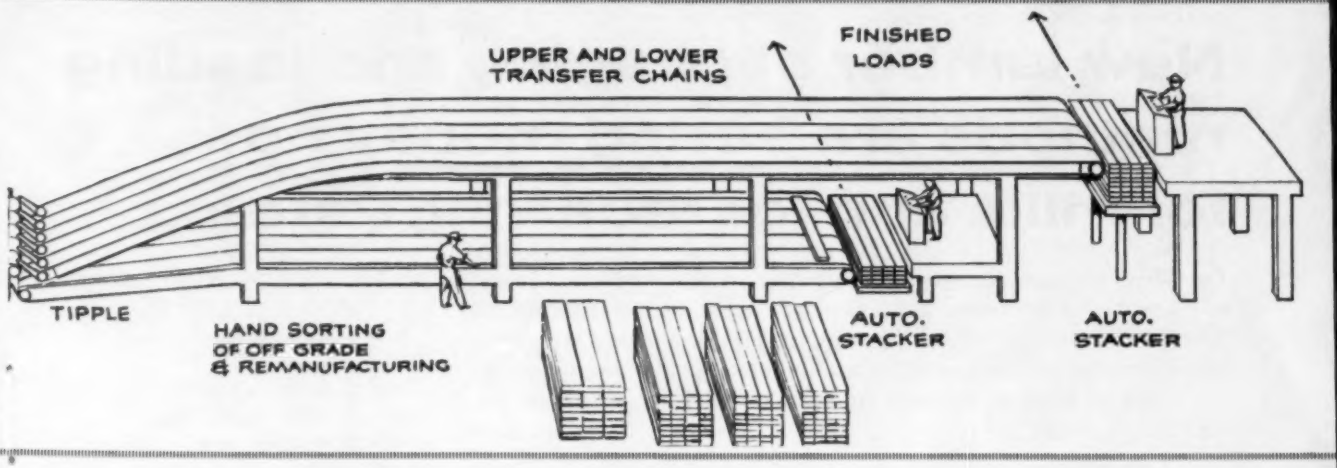
- The trimmer saws lift and the board passes through without trimming.
- The end-printers pull back and the board is not printed or waxed.
- The face grade-stamper does not stamp a grade on the face of the board.
- The board is directed to the proper sort.


AUTO. SAWMILL TRIMMER WITH PRESELECT CONT.
ROLLS TO GREEN PLANER MATCHER
IRVAC
TRANSFER TABLE
IRVAC KEYBOARD OPERATOR CONTROLING PRESELECTOR
GREEN CHAIN OVER 9/4
BELT TO EDGE SORTER 1/4 & 8/4

FLOW CHART for Federated Coop., at Canoe, British Columbia, showing more simplified installation with controls for trimmer and transfers to planer, sorter and green chain.



FLOW CHART for J. Neils Lumber Co., Libby, Mont., showing control preselector for trimmer and for tipples which divert trimmed lumber into proper transfer chain.



All these commands, to-do or not-to-do certain things to an individual board, are carried in the *memory system,* until the specific moment when proper action of the machine is required.

THE MEMORY SYSTEM is a simple device that can be easily understood and serviced by the plant electricians and may be both electrical and electronic.

In addition to these functions it is now also possible, since the development of the tally machine, to include a tallying device in the lineup. This machine automatically counts in the correct category: Every board passing through its sensing section according to its length and grade, permitting an accurate and instantaneous accounting of production.

ONE MAN, the keyboard of a memory system, controls (1) lumber on the lug chain; (2) double-end surfacing; (3) defect trimming; (4) double-end printing; (5) double-end waxing; (6) grade stamping; (7) tallying; and (8) automatic sorting.

Since 75% to 95% of the boards passing the operator are on-grade all he has to do is depress *one* key for 5% to 25% of the boards going by. From that point on, all operations are automatic, requiring no further thought on the operator's part.

THE FUTURE HOLDS even more in store. From where we are today, with little effort, we can foresee an extension of the automation installation that will sort each board into its proper category. Using a system such as in the Setzer type tray sorter, each tray can receive boards of pre-determined length and grade combinations. An automatic stacker can service the trays, making up full load packages, or filling orders by automatically selecting the required boards from their individual trays.

The memory system can be so contrived, that boards may be dropped out into intermediate storage areas and retained until a sufficient number were on hand to make up a stacker load.

Another possibility is the future development of a low-cost stacker. A number of these could be installed under an existing sorting chain, equipped with lugs. The memory system operator could then pre-signal them according to length and grade as before, as well as automatically stacking them. Each slot would be mechanically equipped to automatically package the lumber and eject the package, ready for carrier pick up.

SMALL AND MEDIUM size mills may readily take advantage of automation benefits. They will find it is not necessary to go through extensive revision or rebuilding of the plant in order to install the system. Better still, it is not necessary to install an entire system at one time. The machines and controls are available singly, and the system can be added to a little at a time until the desired degree of automation is attained. [END]

Sash, Door Men Study Cost Saving Actions

Tighter cost control and recruiting of better qualified personnel will mean a more profitable operation for the woodworking industry. This is the observation of a key panel at the 23rd annual meeting of the Southern Sash & Door Jobbers Association.

Louis G. Riecke, Sr., vice-president and general manager of Tulane Hardwood Lumber Co., Inc., New Orleans, said "with jobber members averaging 35 years in the business we have been through all kinds of economic periods. Yet we find the need for getting costs down is more important today than ever before."

An analysis of expenses relating to warehousing and selling brought suggestions for more modern warehouse facilities, an order assembly area, closer supervision of personnel in filling orders and re-examination of insurance as a means of cutting costs.

Other panelists discussing delivery and overhead recommended careful routing of orders to cut down expensive long hauls with light loads. Trucks vs. trailers and fleet maintenance problems were also discussed.

NEW OFFICERS of Southern Sash & Door Jobbers Association, from left: J. W. Zuber, Zuber Lumber Co., Atlanta, Ga., president; J. R. Druham, McPhillips Manufacturing Co., Inc., Mobile, Ala., vice-president; Thomas Birthfield, secretary-treasurer.

The panel on personnel, moderated by W. W. Scott, National Bank of Commerce, Memphis, Tenn., urged careful recruiting, testing of applicants, care in fringe benefits and better management - employe relations.

SIGNODE PACKAGED LUMBER PROGRESS REPORT NO. 3

New lumber packaging and loading methods are saving money now for mills and for receiving yards

For a long time—as you probably know very well—there seemed to be more problems in lumber packaging than there were good answers. This situation is rapidly being reversed, to judge from recent experience by a number of mills and yards with rail shipments of packaged lumber.

Some of these experiences are summarized below. Here are the significant points.

1. Using these new methods, savings in loading lumber at least offset the cost of packaging it.
2. The receiving yards have saved money in unloading when equipped to unload mechanically.
3. The methods are in actual continuing use, and are practical for immediate application in many mills.

The following reports of shipments show actual costs of strapping and loading each car, and reports of the arrival condition. The methods used were developed primarily to save money for the lumber mill.

None of these methods need be considered the ultimate. Variations and improvements will doubtless be made.

Note that the lowest cost methods shown are not intended to be unloaded with a fork truck. Other methods shown, at slightly higher cost, permit fork truck or Fowler Loader unloading. None of these methods will guarantee that the entire load can be mechanically unloaded, if the car has been roughly handled. All shipments shown were in cars with doorways at least 12′ wide.

A number of Signode field engineers were closely involved in developing these packaging and loading methods. In addition, each arrival was checked by a Signode representative.

The Fowler Loader is the key to the savings in loading time that make these lumber packages and methods practical and economical now. The Fowler Loader fits over standard forks on a lift truck, bolts or hooks to the truck mast, has a self-centering swinging boom long enough to set a lumber package in the far corner of the car with the truck on the ground outside. Capacity ranges up to 4,000 pounds with a 15,000 pound capacity lift truck. Price is $1,275.00 F.O.B. Prescott, Arizona.

SHIPPING REPORT NO. 1

Method No. 1

From Haining Lumber Company, Williams, Arizona

This is a minimum cost method, for hand unloading. Nominal package size is 36″ wide by 36″ high by 16′ long. Usual carload consists of 18 packages, for a total of 31,000 board feet in a 40′ 6″ car.

COST ANALYSIS:

Steel strapping and seals	$ 5.81
Strapping labor @ $1.70 per hour	.51
Loading labor and equipment costs	
1¼ hr. lift truck driver @ $1.80 per hour	2.25
1¼ hr. swamper @ $1.70 per hour	2.12
1¼ hr. lift truck time @ $2.50 per hour	3.13
1¼ hr. Fowler Loader time @ $ .25 per hour	.31
Total Cost per Car	$14.13
Total Cost per M bd. ft.	.456

RESULTS

A typical example of results is car ATSF-64207 shipped 11/23/57 from Williams, Arizona, to Currier Lumber Company, Detroit, Michigan. Arrival condition of load: very good. No failure of straps. No load shift. No evidence of rough handling. Receiver reports load compares favorably with those usually received.

SHIPPING REPORT NO. 2

Method No. 2

From Haining Lumber Company, Williams, Arizona

This is a low cost method for mechanical unloading. Nominal package size is 36″ x 36″ x 16′. Usual carload consists of 18 packages, for a total of 31,000 board feet in a 40′ 6″ car. 1¼″ x .035″ HD encircling straps are used on this load.

COST ANALYSIS:

Steel strapping and seals (package straps)	$ 5.81
Strapping labor @ $1.70 per hour	.51
Encircling straps, seals, and staples	3.00
Strapping labor @ $1.70 per hour	.43
Loading labor and equipment costs same as in Method #1	7.81
Total Cost per Car	$17.56
Total Cost per M bd. ft.	.566

RESULTS

Car shipped from Williams, Arizona, to Pinecrest Lumber Company, Chicago, Illinois. Contained only 16 packages, totaling 19,385 bd. ft. of 1″ x 6″ x 12′ and 1″ x 6″ x 16′ in random length packages. The small load was due to a shortage of the required type of lumber, not to any lack of ability to load more in the car. The car arrived in "very good" condition. It was unloaded with a Fowler Loader in 55 minutes.

SHIPPING REPORT NO. 3

Method No. 4

From Kaibab Lumber Company, Flagstaff, Arizona

This is a low cost method for hand unloading. Nominal package size is 48″ x 30″. Usual load consists of sixteen 16′ packages and eight 8′ packages, totaling 36,480 bd. ft. in a 40′ 6″ car. 1¼″ x .035″ HD encircling straps are used.

COST ANALYSIS:

Steel strapping and seals (package straps)	$ 8.38
Strapping labor @ $1.70 per hour	1.53
Encircling straps, seals, and staples	2.97
Strapping labor @ $1.70 per hour	.43
Loading labor and equipment costs	
2 hr. lift truck driver @ $1.80 hr.	3.60
2 hr. swamper @ $1.70 hr.	3.40
2 hr. lift truck @ $2.50 hr.	5.00
2 hr. Fowler Loader @ $ .25 hr.	.50
Total Cost per Car	$25.81
Total Cost per M bd. ft.	.672

RESULTS

Eight shipments had been made by Kaibab Lumber Company from Fredonia (Flagstaff) Arizona, with arrival results as tabulated below:

DESTINATION	CONDITION
Gordon Lumber Co. Chicago Heights, Ill.	Fair condition. Half the load in good condition, half in poor condition.
Kaibab Lumber Co. Holbrook, Arizona	Excellent condition.
Victoria Sash & Door Co. Shreveport, Louisiana	Good condition. Some load shift. No strapping failures. Receiver removed some of the packages with a lift truck although load intended for hand unloading.
Dealers Wholesale Supply Co. Detroit, Michigan	Very good condition. No load shift, no strap failures.
Johnson Doppler Lumber Co. Cincinnati, Ohio	Fair condition. Some shifting across doorway. Some of the straps broke on the bottom bundles.
Oldham Lumber Co. Dallas, Texas	Fair condition. Shift of 3′ or 4′. One package strap broken.
Houston Brick Co. Houston, Texas	Excellent condition, although some load shift and evidence of rough handling.
Russ Wood Specialties Decatur, Michigan	Good condition. No strap failures. Some load shift.

SHIPPING REPORT NO. 4

Method No. 5

From Kaibab Lumber Company, Flagstaff, Arizona

This packaging and loading method is designed for mechanical unloading. Nominal package size is 48″ x 30″ x 16′. Usual load consists of sixteen 16′ packages totaling 30,700 bd. ft. in a 40′ 6″ car or twenty-four 16′ packages totaling 46,050 bd. ft. in a 50′ 6″ car. The cost analysis is based on the 16-package load. Cost per M bd. ft. would be the same for the 24-package load.

COST ANALYSIS:

Steel strapping and seals (package straps)	$ 5.56
Strapping labor @ $1.70 hr.	1.02
Tier straps and encircling straps, staples and seals	4.84
Strapping labor @ $1.70 hr.	.85
Loading labor and equipment costs	
1½ hr. lift truck driver @ $1.80 hr.	2.70
1½ hr. swamper @ $1.70 hr.	2.55
1½ hr. lift truck time @ $2.50 hr.	3.75
1½ hr. Fowler Loader time @ $ .25 hr.	.38
Total Cost per Car	$21.65
Total Cost per M bd. ft.	.705

RESULTS

Car ATSF 64617 shipped from Kaibab Lumber Company, Flagstaff, Arizona, to Berwyn Lumber Company, Chicago, Illinois. Arrival condition excellent. Although the car was unloaded in several phases, yard superintendent believed it would have taken slightly less than an hour to unload continuously. They used two men and a Fowler Loader, and estimate it saved 30 man hours of unloading time.

A more detailed analysis of costs and a full discussion of "How Big Should a Lumber Package Be?" is available from Signode, in a booklet so titled. Send for your copy—and advise if you want help in shipping packaged lumber. We will be glad to arrange to have a Signode man call on you.

First in steel strapping

SIGNODE STEEL STRAPPING CO.

2616 N. Western Avenue, Chicago 47, Illinois

Los Angeles 1, 659 East Gage Ave. • Pittsburg, Calif., Loveridge Road • Eugene, 1955 Todd
Portland, 1519 N. W. Irving St. • Seattle 4, 1750 Occidental Ave. • Spokane, 617 Paulsen Bldg.
Olympia, 1024 Eskridge Blvd. • Canadian Steel Strapping Co., Ltd., Vancouver, B.C.

Paper-faced overlay results in

Panelized Lumber Sheathing

Boise-Cascade lists Speed-A-Ply advantages:

- Ease of handling
- Up to 50% labor saving in application
- Adequate nailing base for all types of exterior siding
- Waste problems held to a minimum
- Elimination of end-splitting
- Proven strength for sub-floors, roofs and sidewalls
- No special nailing required
- No yard loss in cupping (each board within the panel can move independently)
- Building paper can be eliminated when using with shiplap joint

SUBFLOORING using Speed-a-Ply is shown on housing job. Prime advantage is handling the sheet in panels, rather than individual boards. Results in cost savings in carpenter work.

LUMBER SHEATHING MARKETS are being sought by Boise-Cascade Corporation, Boise, Idaho, through their new Speed-A-Ply overlayed lumber sheathing.

The product is being produced in two by eight-foot panels at Boise-Cascade's Emmett, Idaho, plant with a 1958 production estimated at between five and six million board feet (as the material is of nominal one-inch thickness this also constitutes square-footage).

In production, the material uses No. 4 (Western Pine Association rules) common boards of ponderosa pine, white fir and occasionally Douglas fir. Species may be mixed within panels and boards with holes of more than one-inch diameter are not used. Stock is kiln-dried down to 14% moisture content and a uniform 25/32-inch thickness is utilized.

Boards are sorted in vertical racks (a panel is made up of two eight-inch boards, a six-inch and four-inch board) and are run through a company built glue spreader using a blood soya glue—a water resistant interior-type plywood glue.

The glued boards are laid up on a sheet of 38-pound cylinder kraft paper. A second sheet is placed on top and the panel is shoved into the press.

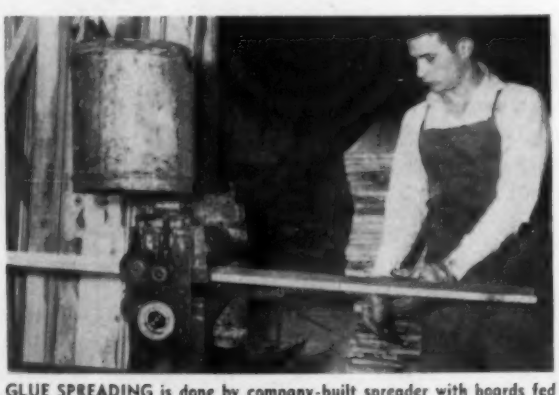
PIECES are not intentionally edge-glued. Some glue seeps between the narrow faces, but this is not essential to the product.

A Speed-A-Ply trademark tag is affixed to the face with wheat paste glue just before the panel enters the press.

As the panel enters the press a light, 8-psi, pressure holds the sides and 60-psi is applied from the top and bottom with 250-degree steam heat. Pressing time is 30 seconds after which the panels offbear through an automatic trimmer control which starts a lugged chain to pull the panel through the combination shiplap and sizing saws.

SPRING LOAD pushes the panel against an even-ender at the off-bear end from where lugged chains pull it through the trim saws. Following each panel, the saw feed lugs come back around on a continuous chain and

FINISHED PRODUCT Speed-a-Ply panel is 2x8-foot sheet. Each panel made up of two eight-inch, a six-inch, and a four-inch board.



GLUE SPREADING is done by company-built spreader with boards fed through to layup man. Interior type blood soya glue used.

are stopped by a limit switch in the proper position to pick up the next panel.

From the trim saws, the panels offbear to the company-built automatic stacker which operates on a continuous chain with four sets of pivoting arms, each of which carries a panel to the stacking area where stacks are made on carrier blocks.

PIVOTING arms are tripped as the panel is ready for stacking and they return to the trim-saw offbear end where a limit switch stops them to pick up the next panel.

A three-man crew produces the product with the foreman checking quality control and mixing the glue and two men accomplishing layup and press loading.

The product is produced in two grades, residential and commercial with the residential grade designed for FHA-approved use.

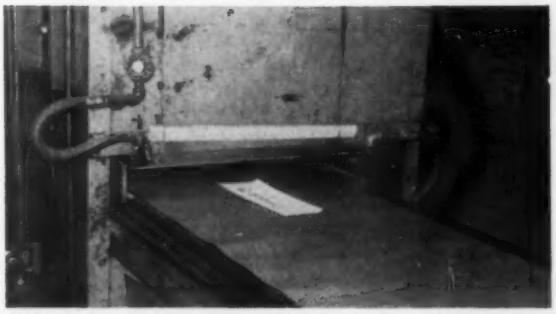
An unexpected use developed recently when a contractor used Speed-A-Ply for concrete forms. He found that after form removal the concrete dropped away easily from the paper facing to enable following use for sheathing. [END]

EQUIPMENT

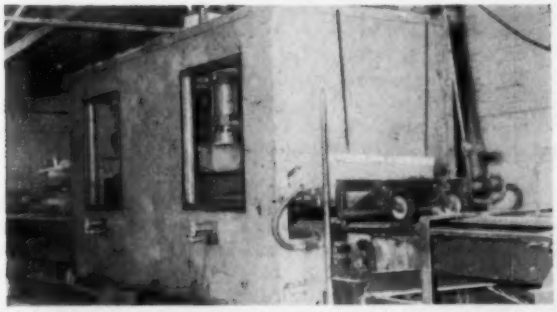
Glue spreader and automatic stacker company-built; Hart door press built by Earle Hart Woodworking Machinery Co., Chicago, Ill., and Greensboro, N. C.; Irvington No. 41 motorized arbor powered by 7½-hp GE motor on shiplapper and sizing; heads standard 10-inch dado set with hogging Deluxe Karbide King by Deluxe Saw & Tool Co.; Square D limit switches; Portland Iron Works automatic trimmer control; U. S. ¾-hp Synchrogear motors powering transfer chains; kraft paper by Crown-Zellerbach Corp., Port Townsend, Wash., mill; American Marietta and Monsanto blood soya glue.

LEFT layup done on feed table for press. Boards sorted by width for spreader at right.

RIGHT Kraft overlay placed on laid-up panel before pressing. Paper in 4x8 sheets.



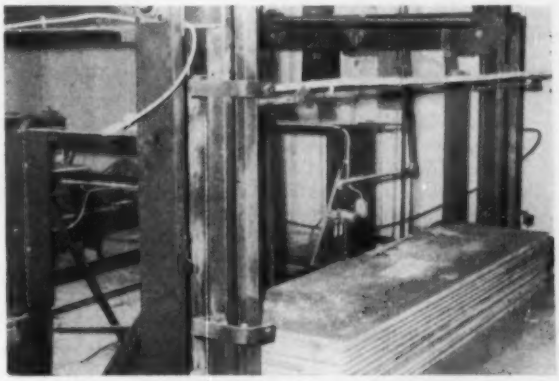
SPEED-A-PLY trademark is placed atop face sheet before panel enters Hart door press. Pressure of 60-psi used with 250° F. heat.



PRESSING is done on Hart door press. Thirty-second press-time allows high production. Press steam-heated. Saws at extreme left.

SIZING and shiplapping done on Irvington arbor. Standard 10-inch dado set with hogging heads.

STACKING of panels accomplished on company-built stacker. Panel transferred on pivoting arms. Knuckles turn, drop panel.



UNLOADING OF LOGS in yard is with Orton crane. The loads of logs, mostly shortleaf pine, average 2400 to 2500 board feet. The truck, one of 12 operated by Dierks Forests, Inc., is an International R-190 unit.

Barker-Chipper Plant

has a highly productive arrangement

IT WILL TAKE a lot of chips to feed the new pulp mill of Dierks Forests, Inc., at Pine Bluff, Ark. One source, supplying five carloads a day, is the company's sawmill at Dierks, Ark., 130 miles away. To produce these chips, the sawmill added a whole new barking and chipping end, and incorporated some of the latest and most efficient equipment available.

Double length logs are unloaded from trucks on arrival at the yard by an Orton mobile railroad crane equipped with a clamshell grapple. This crane also places logs from the piles on the live log deck of the barking shed. Live chains feed the logs to a conveyor of hour-glass rolls leading directly to the barker.

The barker is a Nicholson 34-inch, is equipped with pneumatic hold-down rolls and carries four rotating knives. Since the barker is mechanical, the logs are prewashed by a circle spray as they advance on the log haul.

This line of powered V rolls continues on the discharge side of the barker. Also on the discharge side the barked logs pass through two steel gates held closed by springs. These gates automatically lift the logs from the V rolls to the live log deck leading to the deck saw.

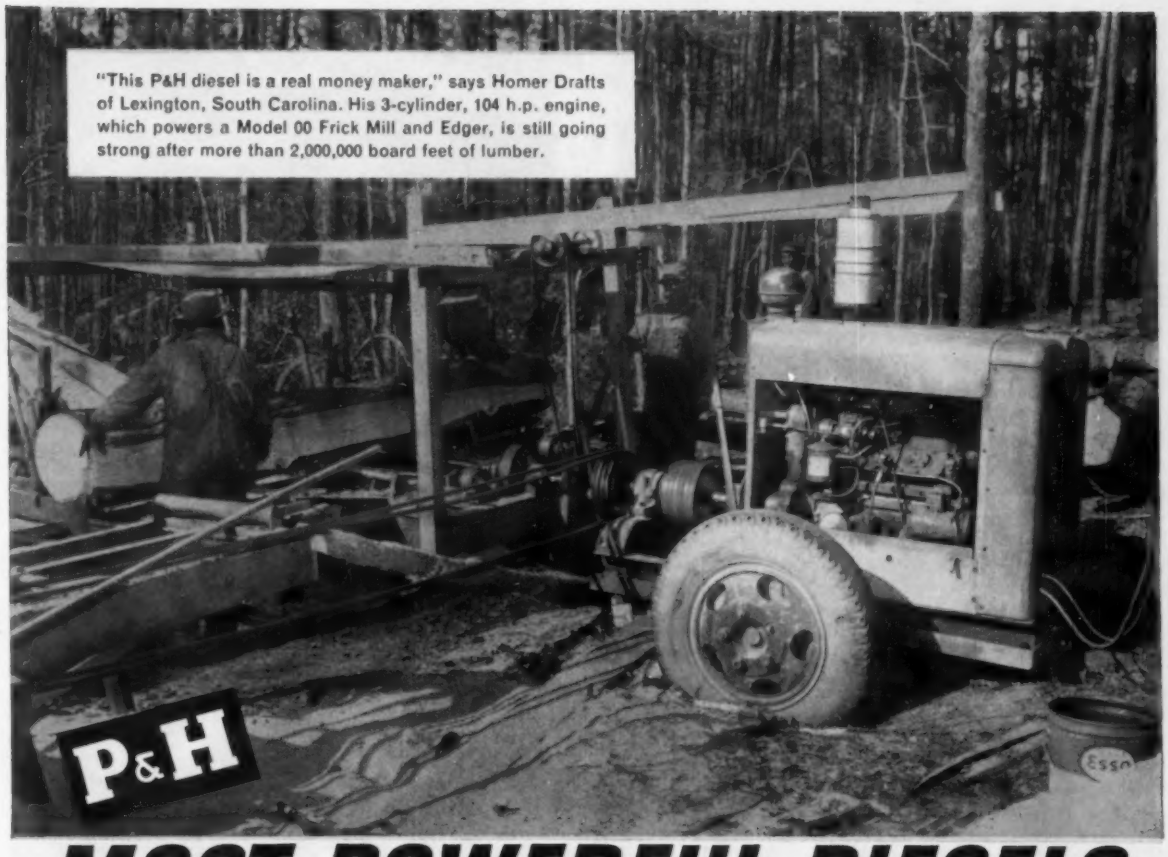
LOGS ARE DISCHARGED on this large steel deck which has six live chains running at right angles to the conveyor. Logs are sorted as they advance across the deck for sawlogs, poles and piling. Most of the logs are shortleaf pine.

On the far side of the deck from the barking line, the logs are again received on a conveyor made up of 12 powered and scored hour-glass rolls. These rolls are reversible, making it possible to send sawlogs to the sawmill log haul at the right and poles and piling to the left. Logs are also cut to length at this point. For this purpose there are two 64-inch Simonds

(Continued on page 44)

Dierks Forests, Inc. partially solved two problems by adding a new debarking and chipping department to the mill at Dierks, Ark. First, it meant an economical utilization of residual wood accumulating at the mill. Second, it meant a large contribution of raw material to the new pulp mill at Pine Bluff, Ark. Dierks plants have a reputation for efficiency of operation and this newly added department should prove no exception. Company engineers installed the l a t e s t equipment in a h i g h l y productive arrangement.

NICHOLSON 45-INCH DEBARKER on discharge side. Logs are carried on both sides of the debarker on powered hour-glass rolls. Steel gates prevent crooked logs from whipping.


"This P&H diesel is a real money maker," says Homer Drafts of Lexington, South Carolina. His 3-cylinder, 104 h.p. engine, which powers a Model 00 Frick Mill and Edger, is still going strong after more than 2,000,000 board feet of lumber.
P&H
ESSO

MOST POWERFUL DIESELS

pound for pound... dollar for dollar!

High-torque P&H diesels have the power to drive blades through toughest timber — knots and all — without missing a beat! Yet they're actually up to 1000 pounds lighter than comparable engines for easier moving, faster set-up.

And what economy! Operators report that the 3-cylinder P&H diesel uses less than 20 gallons of low cost No. 2 fuel in 8 hours of steady running.

You can't beat 'em for easy maintenance, either. They have 25% fewer parts. Complete interchangeability of all wearing parts. "Unitized" P&H power assemblies are replaceable as single, easy-to-handle units in less than an hour!

Any way you look at it, P&H diesels can be counted on to set new records for production, operating and maintenance economy. Make it a point to see them at your P&H distributor soon. Or write for complete information, Dept. 414B, Harnischfeger Corporation, Milwaukee 46, Wisconsin.

HARNISCHFEGER

P&H DIESEL ENGINE DIVISION
Crystal Lake, Illinois

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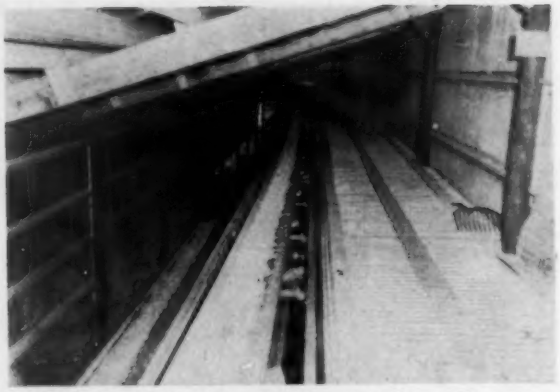
LOGGERS & CONTRACTORS MACHINERY
240 S. E. Clay Street • Portland, Oregon

LIVE LOG DECK has six powered chains which receive barked logs. Logs travel at right angles to barking line, are sorted on deck.



CHIP BUNKER is 160 feet long, holds four railroad cars. The conveyor is company made, using U. S. Rubber belting.

circular saws, so situated that one can work on sawlogs and the other on poles and piling.

Inside the sawmill the logs are fed to two 9-foot Filer & Stowell headsaws and are carried on F & S carriages, and to a Swedish gang saw made by Mill Engineering Company.

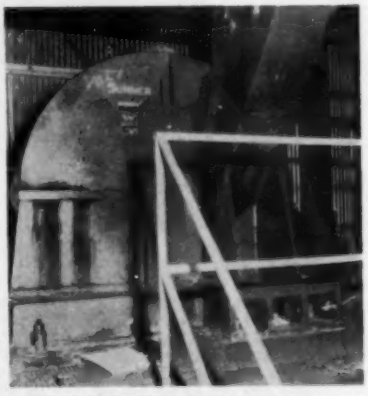
RESIDUAL MATERIAL is converted to chips by a new 66-inch Sumner chipper powered by a 150-hp G.E. motor. From here the chips are pu over a Sumner No. 54 screen. The screen is powered by a 7½-hp U.S. Uniclosed motor. The whole chipping department is housed in a new corrugated steel over frame building.

From the chipper building the chips are conveyed by belt overhead to a large, new company-built chip loader. The company also built all conveyors, using U.S. Rubber belts. The chip loader is corrugated steel over a pole frame. It is 160 feet long and will load four open top railroad cars. Since an average of five cars are filled each day, only one car movement is necessary to receive the daily production.

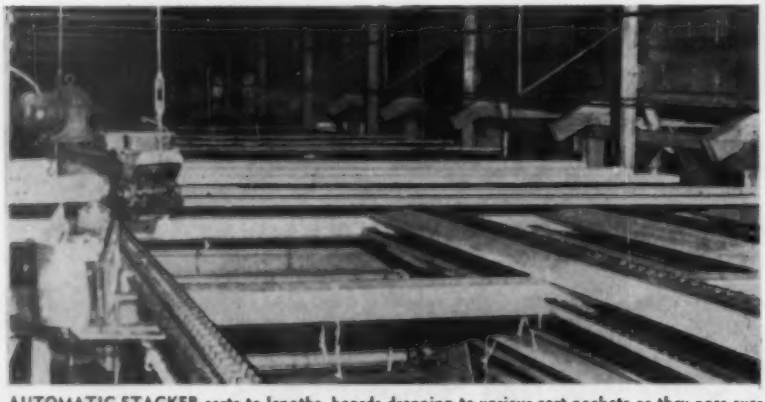
OTHER UNUSUAL FEATURES are to be found around the large plant at Dierks. One of these is the automatic lumber stacker. Lumber issuing from the sawmill advances on chains which pass over sort pockets for a distance of 200 feet. By having inside chains and at various stations and limit stops on others, lumber is sorted to length and automatically drops into correct sort pockets.

Logs are received at Dierks in two types of loads—"long" and "short" loads. Logs averaging 16 feet are hauled in on trucks equipped with two axles and two sets of dual wheels in back. Long loads which may include a lot of poles and piling may be up to 32 feet in length. For these long loads the company uses special Cline trucks and detachable trailer units.

For the empty run back to the woods the trailer rides "piggy-back" on the truck bed. Each truck is equipped with a power take-off winch and a cable behind the cab. The empty trailers are loaded by winching and the use of heavy plank ramps. In the woods they are set off by the loader. [END]



SUMNER CHIPPER is 66-inch unit, powered by 200-hp G.E. motor. Plant produces five cords of chips a day.



AUTOMATIC STACKER sorts to lengths, boards dropping to various sort pockets as they pass over them on the conveyor chains. Moore equipment was installed by the company.

CHIP SCREENS are Sumner No. 54 units, powered by 7½-hp U. S. Uniclosed motors.

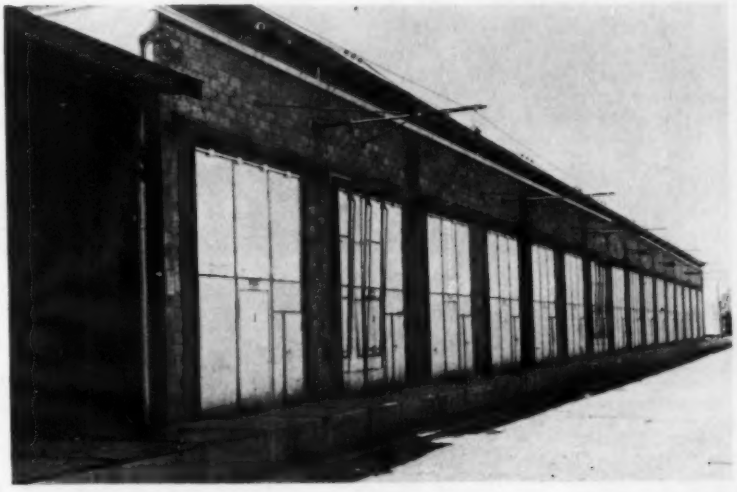
BOISE-CASCADE CORPORATION EMMETT, IDAHO

IN FULL OPERATION WITH — 16 LATEST DESIGN

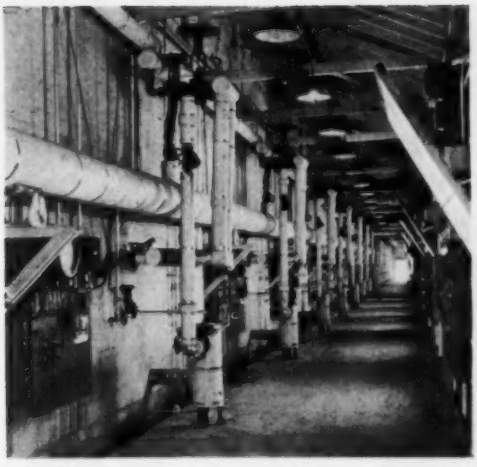
LOVSTED'S *DIRECT-FLO* DRY KILNS

Designed for 120,000,000, but now averaging over 144,000,000 board feet of drying a year. Sixteen (16) single track kilns 104 feet long. *Each equipped with*: 10 Special LOVSTED Specification Gear Head Motors for in kiln service—

10 - 84" diameter all aluminum allow high volume fans. — Finned pipe radiation — Pressure reducer — Desuperheater — 40 - 21" square roof vents. Duplex action wet bulb and vent control. Dual dry bulbs. — Automatic fan reversing — 20 minute to 20 hour adjustable. — Sequence starting — Automatic sequence starting after power failure — doors one end — Panels plastic treated both faces and edges. Interior double treated with LOVSTED penetrator and kiln coater.



Roof with 160 vents is reinforced concrete with top layer of Zonolite Concrete treated with Silecone to keep water out but allow vapor through. Treating has functioned as desired. Vents controlled with latest design roof vent air diaphragm motor. Note simple fasten of pull rod to vent arm.



Top Photo
288 feet of control room, all on the ground with 16 sets of controls, one set behind each of the 16 kilns.

Below
Note the flexible steam main connection and the desuperheaters.

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P. O. Box 311, MANILA, R. P.

Modernized Sawmill Back in Operation

A modernized sawmill designed for use of smaller logs and for greater utilization has been placed in operation by Seattle-Snohomish Mill Co. in Snohomish, Wash.

The mill has been completely converted to electric and compressed air, has been redesigned to handle smaller logs, and has added a resaw and chipper.

Also due for operation immediately is a barker.

Handling of logs in the yard has also been speeded up with the addition of a Michigan Logger which will handle logs from the decks to the mill. Decking in the river will be discontinued.

The operation is owned by Robert Waltz and F. M. Roberts.

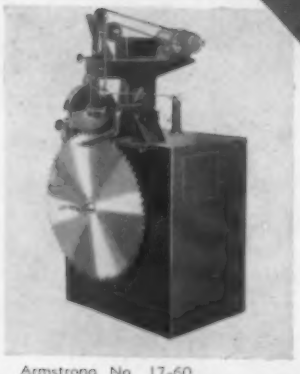
●

Aborigine Resumes

Aborigine Lumber Co., Longview, Wash., has resumed production at its facilities in Longview and Castle Rock, James B. Rogers, partner in the firm, reports. Majority of output will be shipped to Tampa, Fla., where the firm operates a wholesale lumber company. Rogers reports accelerated building activity in the Tampa area.

moneymakers

Armstrong No. 5700BA Air Operated Shaper for band saws.



Armstrong No. 17-60 Automatic Circular Saw Sharpener.

Armstrong Precision Saw Sharpening equipment starts making money for you from the very first day it's installed. You'll upgrade your lumber . . . cut production costs . . . save on labor . . . grinding wheels, saw steel.
Write or call today for full information. Make us prove that Armstrong machines and tools in your filing room are *really* moneymakers.

Armstrong Precision SAW SHARPENERS — TOOLS

ARMSTRONG MANUFACTURING CO.
2135 N. W. 21st Ave., Portland 8, Oregon

Founded in 1902 by E. P. Armstrong

End-Matched Sheathing Uses Short Lengths

Raab Manufacturing Co. at Corvallis, Ore., is producing end-matched, tongue-and-groove sheathing lumber in short lengths of six feet, using waste and short lumber purchased from surrounding mills.

Owen E. Raab, owner of the plant, is using an end-matcher designed in the plant. It can turn out the 6-foot lengths in 1x4's, 1x6's, 1x10's and 1x12's. Twelve men in the plant turn out about two carloads in a day.

Raab says builders prefer the 1x4's or 1x6's for roof sheathing, the 1x6's or 1x8's for subflooring and the 1x8's, 1x10's and 1x12's for wall sheathing.

Other products at the remanufacturing plant include tie plugs for railroad work, pallet boards and pallets and other short lumber products.

●

C-Z Canada Buys Bridge Lumber Co.

Bridge Lumber Co., sawmill on Mitchell Island, near Vancouver, B.C., has been acquired by Crown Zellerbach Canada and will be integrated with the company's extensive lumber production facilities in the Fraser River area.

The mill has been operated for the past 13 years by J. R. Hecht, who developed it into one of the most efficient custom operations in the lower mainland of British Columbia. Hazen Hagerman is manager of the plant, which has a capacity of over 85,000 fbm per eight-hour shift.

●

New Oregon Sawmill

George E. Owen, Eugene, Ore., has established a portable mill on the Smith River near Otter Slough in Oregon, designed to cut 25,000 feet a day. He plans to later add a gang cutting 50,000 to 75,000 feet a day. A planer, dry kiln and burner will also be added in the future. Barge shipment to California is planned for the output.

●

Hines Purchases Mill

Edward Hines Lumber Co. has purchased the Wolverine Western Lumber Co. in Burns, Ore., and will put the 50,000-feet-a-day mill back in operation as soon as the market improves. E. W. Bergstrom will continue as manager.

●

• The Hodge Bros. Lumber Co. at Grand Ronde, Ore., has resumed operation under the management of M. Ogle, Grants Pass. The mill closed in November following the death of R. D. Hodge.

Simpson Picks Ahlskog As Oregon Head

Harold A. Ahlskog has been named manager of manufacturing for Simpson Logging Co.'s Oregon division and will headquarter in Portland, Ore. He is a veteran of 17 years with Simpson, most recently was in charge of manufacturing facilities of Simpson at McCleary, Wash.

Dave Carstairs, who has been manager of Olympic Plywood in Shelton, Wash., since 1948, becomes head of manufacturing facilities at McCleary. He in turn is succeeded by Jim Gilliland, who has been chief industrial engineer for Simpson. Don Fowler, administrative assistant at McCleary, will be assistant manager.

•

Converting to Plywood

Construction work is underway at Bingen Veneer & Plywood Co. in Bingen, Wash., on a plant addition which will house equipment for the production of plywood. Completion is anticipated by summer. Initial production will be rough sheathing, to be followed by finished plywood.

•

New Faces Available

American Hardboard & Nu-Ply in South Bend, Wash., has started production of Nu-Ply faced with tan oak, chinkopin and madrone hardwood veneer.

•

• Plywood & Lumber Corporation of America, a new wholesaling and brokerage service has been established in Portland, Ore., with Jack L. Cutsforth as president.

•

Cedar Barker Developed

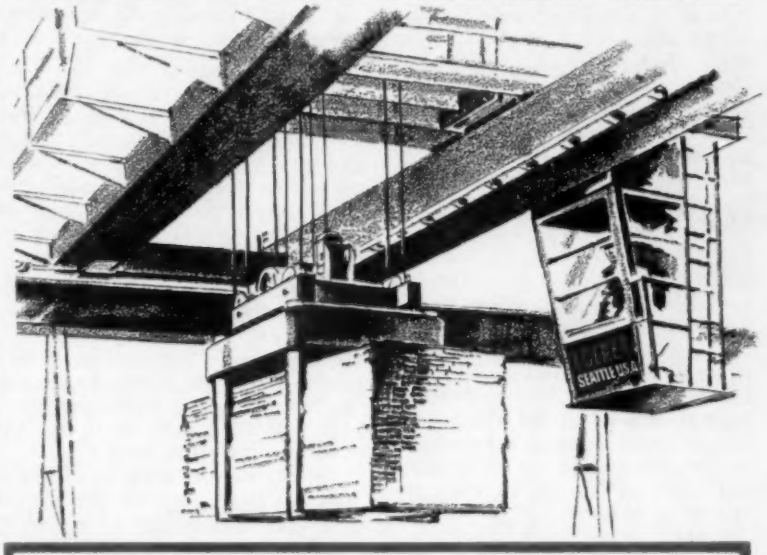
Barking of cedar is now being accomplished at Portland Lumber Mills in Portland, Ore., as the result of mechanical problems solved by Les Doty. The innovation making possible barking of cedar was simple: knife attached to the barker to cut the bark crosswise at 8-inch intervals so that it comes off in short lengths rather than in the long strips which previously snarled the machine.

•

Penta Treatment Added

Olin Mathieson Chemical Corp., Forest Products division, has added Penta to its line of treated woods, now offers creosote and Wolman brand salts and Penta treatment. Two plants in Shreveport, La., have been converted to Penta.

EDERER



Lift—move—stack—unit loads faster—and in less storage area

In many mills in the forest products industries, EDERER grapple cranes have proved their worth in handling unit loads with "job-engineered" efficiency. They stack as high as overhead clearances permit—and with only eight inches clearance between stacks. They can be built to handle practically any type or size of unit load at whatever speed you require.

The grapple is push-button controlled by the operator. It will turn through a complete revolution in either direction, allowing freedom of handling and load spotting. Arms open and close hydraulically and adjustable pressure prevents any damage to loads.

At your request, we'll be glad to send you our grapple crane Bulletin C-203. It will give you full information.

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EDERER CRANES

SINCE 1901 "JOB-ENGINEERING" CRANES AND HEAVY EQUIPMENT

Modernization Program at Michigan Pole & Tie Co.

speeds yard handlings, improves production at the sawmill

In a recent modernization program the Michigan Pole & Tie Co. at Newberry, Mich., went all out and made significant changes and additions in almost every department. With a labor-saving, greater-production goal in mind, management emphasized more efficient, high-speed equipment. New equipment includes kilns, carriages, and mobiles.

Three new pieces of mobile equipment are handling logs and lumber around the mill yard. Largest of these is a Clark "Ranger" 200 lift truck. This machine has a 20,000-lb. capacity and is equipped with special 8-foot lifting arms. In addition to handling lumber stacks in the yard, the Ranger is used to charge and discharge the dry kilns. The extra-long arms and power of this big lift truck enables the machine to pick up a whole kiln-truck load at one time—4,000 board feet.

Next in size is a new Clark lift truck, Model CY 150, Type G. This machine has a 15,000-lb. capacity, and the 6-foot arms can lift a stack of lumber 20 feet. This machine keeps the sorting pockets of the green chain clear and handles lumber generally around the yard.

Last, but far from least, among the newly acquired mobiles is an Oliver Super 88. This 49-hp tractor is equipped with 4-foot arms and is used almost exclusively for handling logs in the yard, supplying the log pond, etc. The bottom, straight arms, plus the over-reaching arms form a solid V. This fork may be tilted by hydraulic cylinders to a vertical position to cradle the logs in transit, or may be tilted to below the horizontal to permit the logs to roll off.

Michigan Pole & Tie Co. kiln drys lumber only on order. These orders, however, have been more than sufficient to warrant the installation of two new kilns. The new kilns are Imrie Sipho-Jet kilns of the double track, end piling type designed for loading on regular kiln trucks by a fork-lift truck. The lumber is all piled on sticks in bulk handling packages.

The holding capacity of each kiln is approximately 25,000 to 30,000 board feet of lumber depending on thickness and lengths. Air circulation, provided by one 60-inch fan in each kiln, is always parallel to the stickers. By means of jet recirculation kiln air equal to the amount handled by the kiln fan each minute is circulated, affecting a saving of electric power.

The drying operation is controlled automatically with ElectroniK multiple thermocouple controller-recorders. These kilns also have a fan-pressure operated ventilation system which is essential to the prevention of kiln burn and sticker stain in the drying of white pine and maple particularly. The kilns have been successfully drying 10/4 hard maple, and 10/4 to 12/4 pine.

Michigan Pole & Tie is operating one shift of 24 to 25 men, with a production of 15,000 to 17,000 board feet if hardwoods are being run, or about 25,000 board feet in conifers. Several new pieces of equipment in the sawmill itself have added to the modernization of the production line.

Logs are fed to the 66-inch circular saw on a new Super-Swede riderless carriage with cable hydraulic power. The 16-foot carriage has a 42-inch opening and the power is carried to it on a panagraph.

Boards are edged on a new 3-saw Wheland edger. A 2-saw Tower trimmer completes the conversion of the green lumber.

A novel piece of ingenuity may be found in the sawmill which involves no new or elaborate equipment. At the deck-end of the log haul, logs strike a bang plate on the mill-side of the deck and automatically activate two notched hydraulic kickers which shove the logs onto the deck. Logs are easily lined up on the deck conveyor chains and the deck is kept full without anyone having to peavey the logs in place. [END]

New Yard Equipment

CLARK RANGER 200, equipped with 8-foot arms, can pick up whole kiln load at one time.

CLARK CY-150 unloads cart pulled out from green chain sort pocket by Fordson tractor.

OLIVER SUPER 88 dumps logs into pond. The 45-hp rig is equipped with 4-foot arms.

Manufacturing Improvements

SUPER SWEDE riderless carriage with cable hydraulic power has 42-inch opening.

BANG PLATE at far end automatically activates hydraulic kickers, shoves log on deck.

IMRIE DRY KILN has 60,000-board foot capacity, dries 10/4 hard maple easily.

$ DOLLAR CONSCIOUS?

SURE YOU ARE . . . .

That's why you want a dry kiln to set your mill far ahead in today's keen competition for seasoned-lumber markets . . . a dry kiln that soon pays for itself through reduced drying costs and top-quality seasoning . . . a kiln designed with YOUR mill in mind–to fit YOUR specific needs –a Moore Cross-Circulation Kiln!

- If you are contemplating installing a kiln, let us show what the Moore Cross-Circulation Kiln can offer you. More than 10,000 Moore Cross-Circulation Kilns are in daily operation, helping mills just like yours in all parts of the U. S. to move out **front** in stiff competition!

In addition to the above battery of Moore Kilns, the J. Herbert Bate Co., Wallowa, Oregon, is installing four additional Cross-Circulation Kilns–quality drying pays off!

Write, wire or phone one of our four modern factories to find out how you too can move ahead with Moore. And remember . . . you can depend on Moore–serving the lumber industry for over ¾ of a century!

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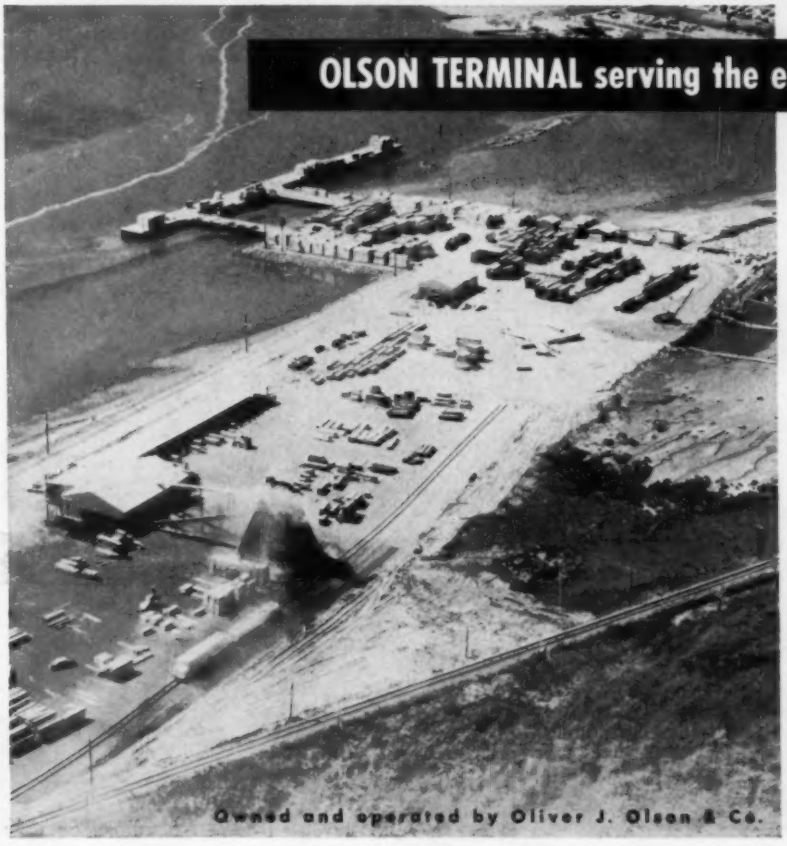
Oldest and Largest Manufacturers of Dry Kilns and Veneer Dryers

JACKSONVILLE FLORIDA · BRAMPTON, ONT. CANADA · VANCOUVER, B. C. CANADA · NORTH PORTLAND OREGON

OLSON TERMINAL serving the entire lumber industry



Owned and operated by Oliver J. Olson & Co.

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Planing, Resawing, Sorting for any Size Shipment—with ample facilities to mill and assemble your biggest shipment of lumber and forest products.

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KIRBY LUMBER CORPORATION DID—

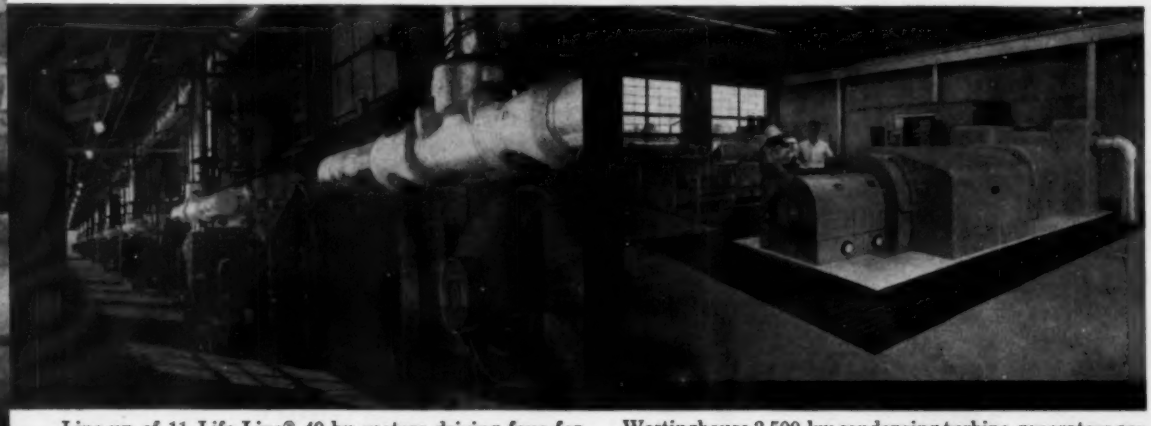
and exceeded production estimates by 15 per cent

The Kirby Lumber Corporation, of Silsbee, Texas, decided to POWER-UP their operation with a production objective of 240,000 bd-ft per work day. They are now producing 274,000 bd-ft per work day—an increase of 15 per cent over the original estimate. Complete electrification of the Kirby Mill was accomplished through the use of Westinghouse equipment ranging from turbine-generators to over 1,000 electric motors.

Magamp* regulation of the four log carriage drives assures smooth, fast operation and results in maximum production with exceedingly low maintenance and operating cost. Power costs are low since a large percentage of the power used by the carriages is returned to the line during deceleration and braking.

Let Westinghouse help you in your program to POWER-UP. Contact your Westinghouse sales engineer for complete information. Or write: Westinghouse Electric Corporation, P. O. Box 868, 3 Gateway Center, Pittsburgh 30, Pennsylvania. *Trade-Mark

J-96123

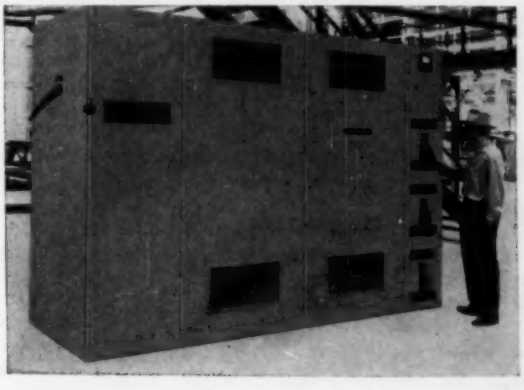


Line-up of 11 Life-Line® 40-hp motors driving fans for Moore Dry Kilns. All drive equipment is controlled with Westinghouse Control Centers or individual starters.

Westinghouse 3,500-kw condensing turbine-generators are in centrally located power plant. Power is fed through Westinghouse 5-kw metal-clad switchgear with DH air circuit breakers.

This POWER-UP Program was under the direction of H. E. Bovay, Jr., Consulting Engineers, consultants to the Kirby Lumber Corporation.

One of 13 Westinghouse 500-KVA, 4,160-volt dry type power centers in the plant. Power is brought close to the load and then distributed over short runs at utilization voltages.



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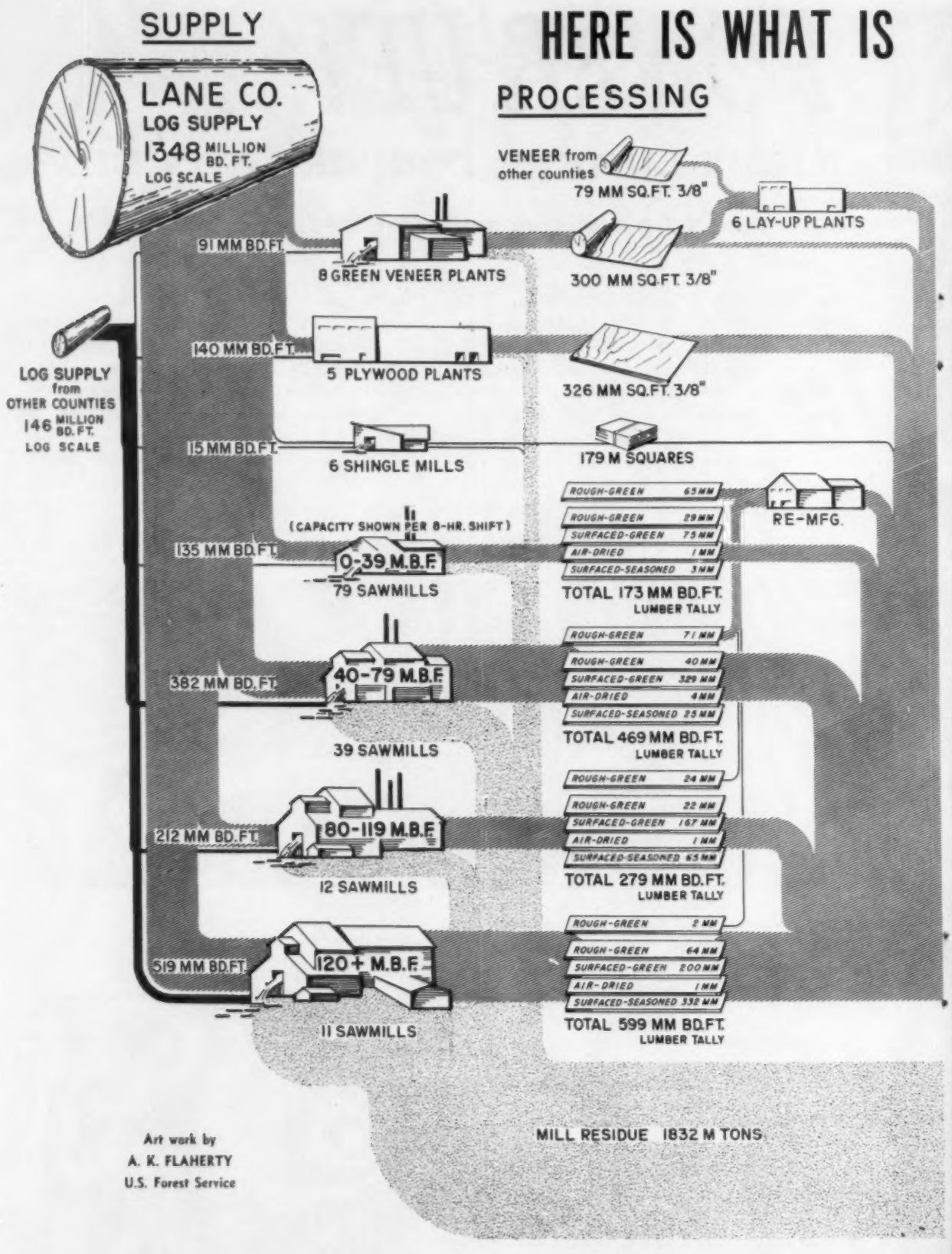


Art work by
A. K. FLAHERTY
U.S. Forest Service

HAPPENING TO LOGS IN LANE COUNTY, OREGON

Here is one of the most informative, comprehensive and unusual study presentations of the annual log supply consumed and what happens to the wood, that has ever been our privilege to present to the industry. It is the first of its kind. Though it concerns but one of Oregon's principal forest producing counties, the significance of similar applications to wood producing counties throughout the nation is immediately apparent.

By

Donald R. Gedney and R. O. McMahon

Pacific Northwest Forest and Range Experiment Station
Forest Service, U.S. Department of Agriculture

● The old saying, you can't see the forest for the trees, can work in reverse—the forest obscuring the trees. This is sometimes true when thinking of the forest economy of an area—the many individual parts become lost or merged in the overall picture. Yet each part is a basic building stone in the area's economy. These parts include the harvesting of logs, their processing into products, and the utilization of wood residues. Unless segments are examined individually, it is difficult to see the role each plays. But in doing this, it is easy to lose sight of the relations between parts and of parts to the whole.

The accompanying flow chart brings into focus the role of each segment of the forest industries of Lane County, Oregon. It shows annual log harvest, movement of this raw material to the forest industries in the county, products from each industry, extent of remanufacturing, and disposition of residue developed in manufacture of products.

Data upon which the chart is based came from a study of the forest resource and associated industries in Lane County, as of 1955. The study was carried out by the Pacific Northwest Forest and Range Experiment Station, in Portland, in cooperation with the Lane County Chamber of Commerce.

Quantities of logs consumed and products manufactured are shown in board feet. Output of veneer, plywood, shingles, and mill residues, though shown in units of measure characteristic of the product, is drawn to scale in terms of equivalent board feet. Widths of flowlines are thus directly comparable.

Despite the fact that logs can be moved long distances relatively easily, most of the logs produced in Lane County are processed there. Log supply is practically in balance with consumption, with but 10% imported from other counties. Only a negligible amount, 1% exported (not shown on the chart).

In terms of log consumption, sawmills were predominant.

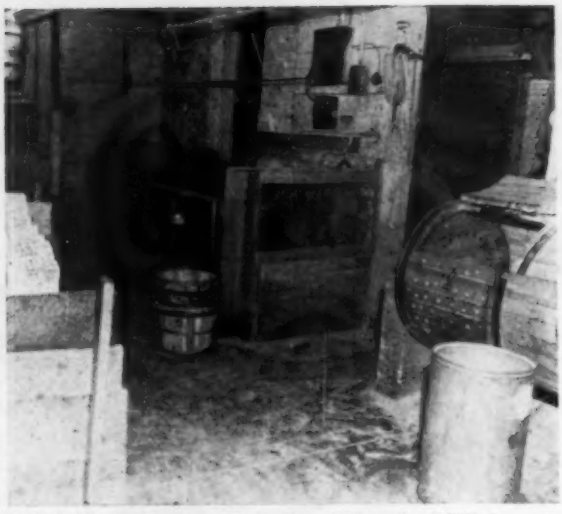
- Those in two daily capacity classes, 40-79 MBF and 120+ MBF, are the major log users.
- Larger mills carry manufacturing to a higher degree of refinement than smaller mills.
- Most surfaced-seasoned lumber comes from larger mills as mill size decreases, a higher proportion of the end product is rough-green lumber.
- Plywood and green veneer plants, although consuming a smaller volume of logs than sawmills, represent an important contribution.

They provide a high-value outlet for logs and make possible integrated use of the forest resource.

A comparison between products manufactured and total residue developed is revealing. Widths of lines at the lower righthand side of the chart are strikingly similar. In other words, only a little more than half the wood in the log is converted to lumber, veneer and plywood, or shingles; the rest is residue material. Utilization of residue allows greater product output without any additional drain on the forest resource. To an individual mill nonuse of residue can mean the difference between black and red on the balance sheet. Forty-five per cent of the residue in the county was utilized for fuel, and 33% was not utilized for any purpose. Thus, a considerable potential exists for putting to higher-value use, residue used for fuel or burned as waste.

Though depicting a specific situation for a given area, the chart indicates what can be gained from such studies. [END]

UNLOADING car of pecan hickory ball bat rounds (reject). Such material is manufactured into smaller end use items.



TUMBLING handles in wax in wooden cylinders. Small ¾" pieces are tumbled with hard pieces of wax in cylinder.

Unusual Utilization that built a successful business

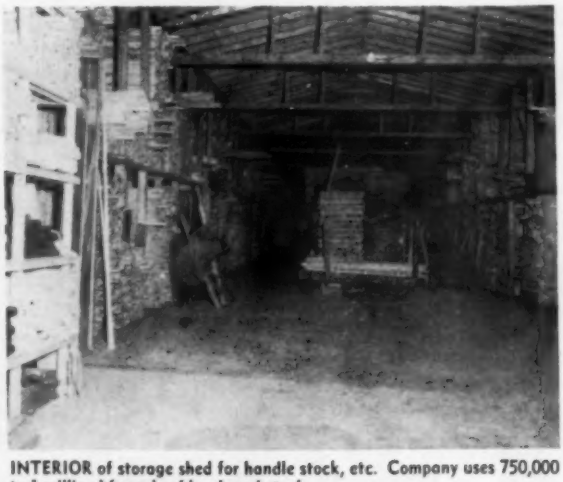
by converting residues of other wood industries into useful products

THE UNIQUE UTILIZATION of hardwoods has become big business at Anchor Manufacturing Co., Piqua, Ohio. This company primarily manufactures handles, wood turnings, and shaped wood parts, but the variety of end products is almost endless.

The variety of end products is reflected to some degree in the diversity of raw materials used. Anchor uses between 750,000 and 1,000,000 board feet of lumber a year—practically all hardwood. As might be expected, this is mostly ash—for handles, but large quantities of hickory, oak, maple, basswood, and walnut are also used. The walnut is used principally for turned lamp parts.

Most of the lumber used comes in carload lots and is kiln dried, cut and machined at the Piqua plant. But a great deal of residual material from other manufacturing plants is also used. For example, a ball bat manufacturing company in Alabama regularly sends box car loads of reject pecan hickory ball bat rounds to An-

SANDING lawnmower cross handles. Turned handles are placed on 8-place spindle and revolved against various abrasives.



INTERIOR of storage shed for handle stock, etc. Company uses 750,000 to 1 million bf yearly of hardwood stock.

chor. Flooring companies send in loads of trimmer blocks of maple and oak. Furniture factories, sucker rod manufacturers, and hardwood turning plants of all kind contribute to the raw material of this very diversified outlet.

Anchor Manufacturing Co. manufactures practically all production on order and to customer specifications. No orders are too large or too small.

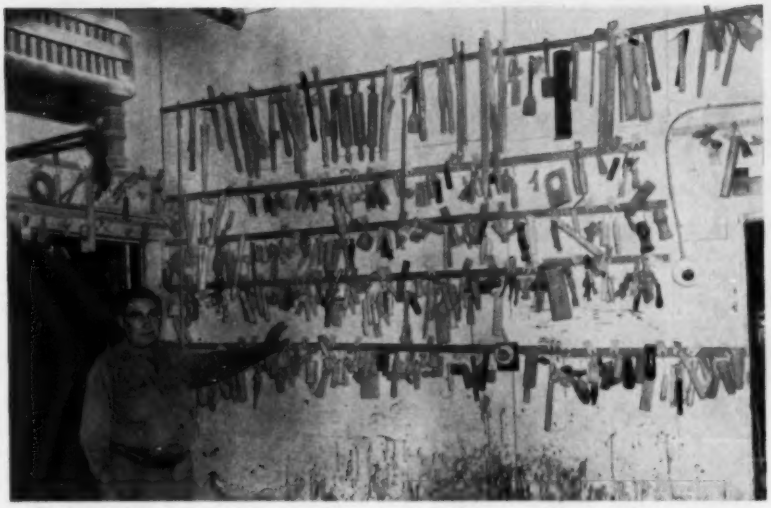
Personnel ingenuity is constantly being called upon to solve problems of production details. Some are simple, some quite knotty. A recent example is—how to bore the sides of a toy ladder and insert the three rounds all in one operation. Final product here would go to grace toy fire trucks.

SPECIAL MACHINERY in the plant is mostly company designed. Not included in this list, however, are a DeWalt cutoff saw, a Hermance molder, and the Perfection dry kiln.

One special machine is used in sanding such things as lawnmower cross handles. The turned handles are placed on 8-place spindles and revolved against various abrasives. Another special machine bores and turns lawnmower rolls in one operation.

Anchor came up with an interesting setup for waxing tool handles. This is done by tumbling the handles in revolving wood cylinders about 30 inches in diameter. There are two of these, and each contain small hardwood spheres about ¾-inch in diameter in addition to larger irregular pieces of wax.

Handles that are finished are hand dipped in lacquer and then suspended from an endless conveyor. When full the conveyor holds 352 handles. The handles travel half an hour, out through a room adjacent to the finishing room, and are dry and ready to be packed when they get back.



A FEW PATTERNS turned out by the unique plant are displayed on the wall racks, being pointed out by plant superintendent Clifford Kiefer.

Residue material is burned in the steam boiler. An auxiliary gas boiler is used at night in order to keep the dry kiln going 24 hours a day.

Anchor Manufacturing Co. provides steady year-round employment for 40 men and women. Key personnel includes: S. E. DuBois, president; S. E. Holsinger, secretary; and Clifford Kiefer, superintendent. [END]

PARTIAL LIST OF PRODUCTS

SPECIAL ITEMS	STOCK ITEMS
Cutlery handles	Door stops
Small tool handles	Sash stops
Crank handles	Soldering copper handles
Bail woods	File handles
Flat wood work	Chisel handles
Molding work	Plain, beaded, spiral grooved dowels
Long handles	
Farm tool handles	Wood mixing tools
Lawnmower rolls	Window pull down poles
Pitman rods	Glass mold handles

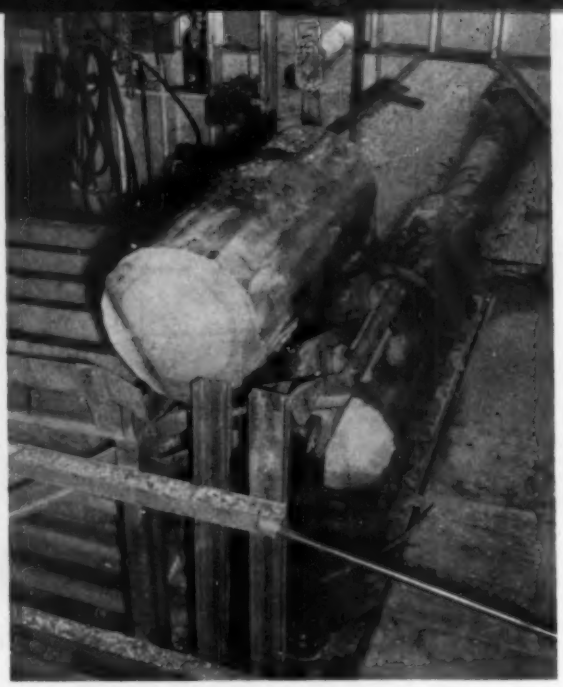
S. E. HOLSINGER, secretary, at his desk. His plant makes stock and special items.

SPECIAL MACHINE bores and turns lawnmower rolls. Hedgeshear handles suspended from endless conveyor in background move from lacquer dipping room and dry enroute.

PLYWOOD INDUSTRY

Core Charger Uses 3 Power Sources

- Hydraulic-pneumatic on elevator cradle
- Air for the charger head
- Water for lateral leveling



ELEVATOR-CRADLE raises blocks 4½ feet from incoming chain level. When the elevator reaches the top, it tilts, rolling block onto sloped deck feeding charger head. Vertical movement of the cradle control is by a hydraulic pneumatic 8-inch piston electrically controlled through Microswitches.

Water, hydraulic-pneumatic, and air are all included in power employed on the core charger at Brookings Plywood Corp., Brookings, Ore. The unusual power design was part of the installation planning done by John J. Connors, Jr., plant manager.

- Hydraulic-pneumatic is used on the elevator-cradle.
- Air is used on the charger-head
- Water is used on the lateral leveling

Blocks come into the plant from the pond on a log-haul with a Blue Babe deck saw with air hold-down on hand to do whatever bucking is required. This saw is operated by the chargerman.

The chain-level is 4½-feet below the lathe level, requiring a vertical lift to the charger-feed deck level. This is accomplished by an elevator-cradle actuated by a stop hit by the block. When the stop is tripped, the feed-chain is stopped and the hydraulic-pneumatically-powered cradle starts upward with the block. As it reaches the top a stop tilts it, rolling the blocks onto the charger deck. As it does this it hits a Microswitch causing the elevator to drop back down to chain-level where it hits another limit switch starting the chain to bring another block to the stop, re-starting the cycle.

The 10-foot charger deck is sloped downward, toward the lathe, allowing gravity feed of the blocks to the charger. An air-stop, also controlled by the chargerman, holds the blocks until he allows one to roll onto the charger-head.

The charger-head is a V-shaped cradle. It is mounted on a carriage traveling on tracks with the unit powered by a 10-inch air cylinder for fast-charging. As the block is moved forward into the lathe, lateral leveling is controlled by two water-operated vertical pistons. The plant's high water pressure of 120 psi makes this economical power ideal as movements are short and positive.

The core-side, which was just recently installed, includes a Coe 60-inch lathe with Redco drive, Redco tray selectors, an air-breaker on the tipple with three 65-foot trays, and a Coe clipper. [END]

CRADLE CHARGER HEAD is controlled by valves at left. Air is used on travel for fast action. Air-stop foot switch on floor allows chargerman to drop a block at a time.

CHARGERMAN rolls block onto charger for Coe core lathe. Charger moves in and out from lathe on tracks, is air-powered, with water power on lateral leveling.

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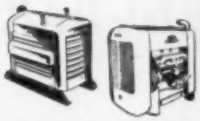

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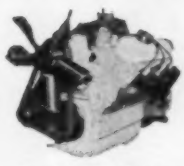
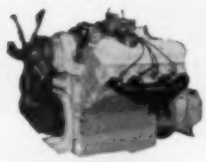


Ford "477" V-8



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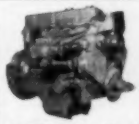

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Projected sight-patterns contribute to

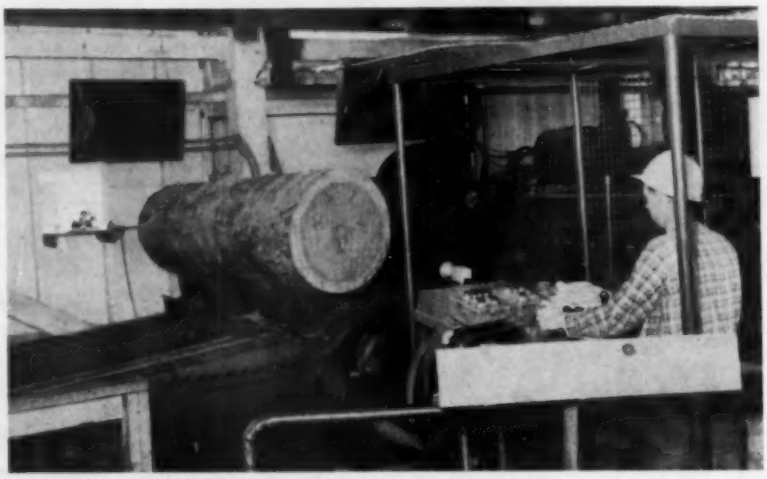
RAPID, ACCURATE CORE CENTERING

at these three West Coast plants

Core charger pre-centering of reruns and core blocks as rapidly and accurate as possible is most important in a high production core lathe operation. Accurate pre-centering results in a minimum of roundup.

Light sources projecting a single spot of light on each end of the block have been used for some time, but recently several operations have found that the single spot did not provide rapid enough centering where the core was originally peeled slightly off-center. In this case, the heart would not provide an accurate core-center.

Three plants have recently solved this problem by installing sight-pattern slides in their light projectors. The sight-guides give the chargerman a reference near the outer surface of the core for quick visual estimation for centering.



AT McMILLAN & BLOEDEL photographic projectors throw concentric circles on both ends of logs to determine geometric center. Mirror on walls shows operator other end of log.

Concentric Circles . . .

At McMillan & Bloedel in Vancouver, B.C., photographic projectors throw concentric circles on both ends of logs as they lie in a steel cradle. The operator jockeys the log with push buttons until projected circles correspond with the geometric center of the log. The cradle is moved in three directions by action of four hydraulic cylinders, one on each corner. When it is dead center, air cylinders move log quickly into chucks.

Gunsight Pattern . . .

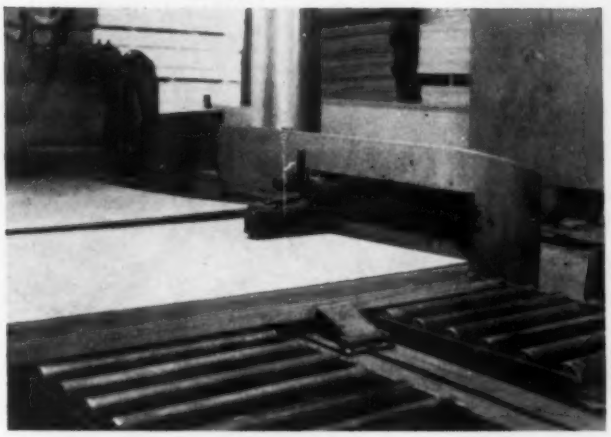
Textron, Inc., Coquille, Ore., has a gunsight pattern which they project on the core ends. This gives a series of concentric circles approximately three inches apart, with a vertical and a horizontal line passing through the center.

Projected Dots . . .

At U.S. Plywood, Gold Beach, Ore., the Kliegel Bros. pre-center spot projects a circle of dots 10 inches in diameter with horizontal and vertical rows of dots passing through the center. The slide was made by pricking pin-points in a copper sheet which was inserted in the projector. At U.S. Plywood, the idea was first used at the Associated Division in Eugene, Oregon. [END]

AT U. S. PLYWOOD, Kliegel Bros. pre-centered spot has copper plate with 10 holes punches in to make aiming target when pre-centering.

AT TEXTRON, INC., the concentric circles appear approximately three inches apart with a vertical, horizontal line passing through center.



SHOE pulls panel into sander. Unit is hydraulically-operated. Piston returns, ready for next panel after sander feed rolls pick up panel into sander.

New Panel Feeder

makes sanding a one-man operation

A NEW J&H PANEL FEEDER in use at Drain Plywood Co., Drain, Ore., makes sanding a one-man operation. This is the first production model of the feeder.

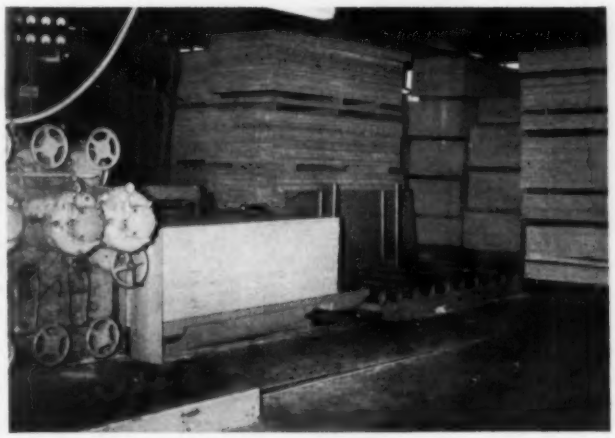
Only an offbearer is required to operate the Yates-American Model 268 60-inch eight-drum sander.

A hydraulic piston-operated shoe pulls panels into the sander. As the end of the panel enters the sander, a hold-down wheel on the sander's feed end drops, tripping an Allen-Bradley limit switch which triggers the American scissorlift on the feeder to bring the next panel into position for feeding. After a two-second delay, the shoe pulls another panel into the machine.

A lift truck places stacks of panels to be sanded on a set of power rolls on the feed end of the scissorlift. When the last panel is reached, the power rolls are automatically activated to roll another stack of panels onto the free rolls on the scissorlift. The scissorlift is automatically dropped to receive the next stack.

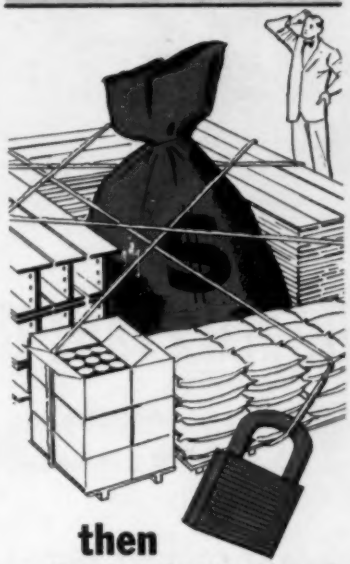
A Newman 3-hp motor drives the hydraulic pump powering the piston-operated shoe. The hydraulic equipment and the Allen-Bradley and Square-D electrical controls are all compactly mounted in a 12-inch wide case on the shoe-side of the scissorlift.

The panel feeder was developed by Emil Herman and Clyde L. Johnson of the Westfir, Ore., division of Edward Hines Lumber Co. It is being manufactured by Drain Machinery & Supply Co., Drain, Ore., and being marketed by E. V. Prentice Machinery Co., Portland, Ore.



STACK placed on power rolls at right. Stack moves automatically into scissor-lift when sander is ready to receive. Yates-American sander.

CASH TIED UP IN INVENTORY?



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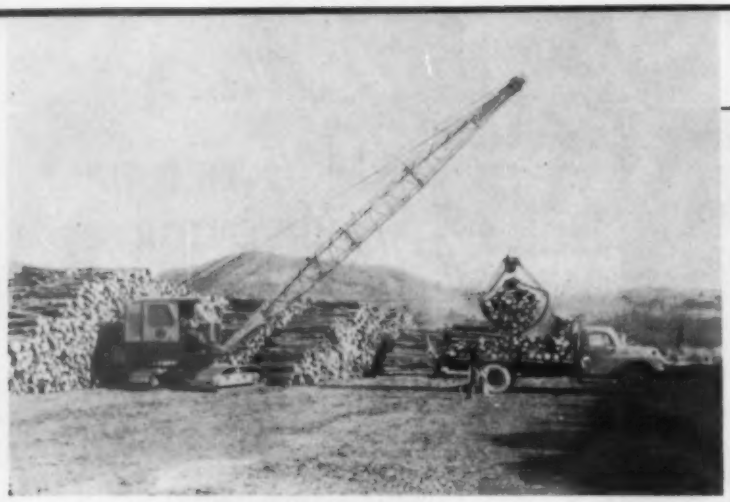


KOEHRING MOBILE CRANE unloads log trucks and builds the decks in the plant's storage yard. The crane is equipped with Mack tongs that can pick up about a cord in a bite.

Board Plant Operates on Native, Mixed Species

Highly automatic plant produces 400,000 square feet a day of insulation board with only five operators between chip digesters and dried base mat.

ALMOST COMPLETE AUTOMATION and efficient utilization of native woods are the more important factors behind the great contribution being made to the Mid-Pennsylvania economy by the Barrett Division plant of Allied Chemical & Dye Corp. In its continuous production of insulation board the Sunbury, Pa., plant incorporates the latest equipment and design in the board mill business. From the handling of logs in the wood yard to the complex multiple finishing processes the flow of production is marked by the small size of the work force. Plant was visualized and designed by Barrett's engineering department and Johnson & Johnson, Inc., consulting engineers.

Operating at a capacity of 400,000 square feet per day on a half-inch basis, the plant employs approximately 200. Actually, only five operators are required between the chip digesters and the final production of the dried base mat. The plant operates around the clock.

WOOD YARD: Facilities at the wood yard provide storage for several months' supply of logs. After being weighed on company platform scales, the trucks are unloaded by a new Koehring mobile crane. The trac-mounted boom crane is equipped with Mack clamshell tongs capable of picking up about a cord of pulpwood per bite. The crane places the logs in dry-deck storage piles. The wood is sorted and piled by species, that is, three separations are made—pine, oak and mixed hardwoods. The latter includes all hardwood species except oak.

The yard has one other piece of log-handling equipment—a Pettibone Cary-Lift. This machine transports the logs from the storage piles to a long, steel deck leading to the chipper house. This deck is declined from about 4½ feet to about 3 feet. Logs are placed on the high side by the Cary-Lift, spaced and slanted angle-irons preventing logs from rolling back off the high side. Two men with pike poles pull the pulpwood down to the lower side where the log-haul chain, running in a steel trough, conveys the logs into the chipper house.

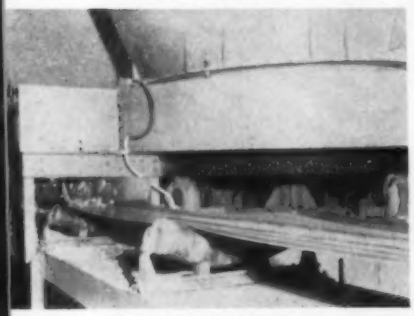
CHIP MANUFACTURE: The brick and concrete chipper house was specially constructed for the purpose. This building houses a Murray 66-inch, 10-knife chipper, a cyclone, chip screen, and a Bauer Bros. chip abrader. The logs are not barked before going through the chipper. Debarking is done on the chips by the abrader. The bark is reduced to such a small size that it is screened out when the chips are screened. Chips and bark pass over the Tyler Tyrock vibrating screen which removes the bark and the chip fines. These particles are blown to the boiler house to be burned as auxiliary fuel.

Accepted chips, both standard and oversize, are next conveyed on a long, single-belt Webster conveyor to the storage silos. These three silos were built by Marietta Concrete Co.

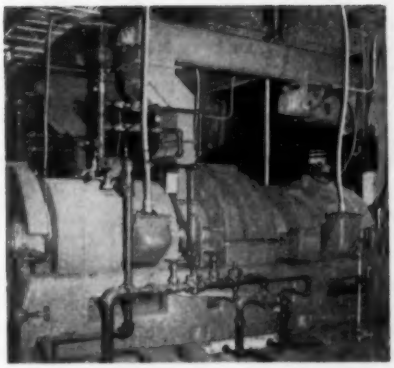
PETTIBONE CARY LIFT supplies deck with logs. At lower edge of deck a conveyor chain takes the logs in a trough to the chipping operation.

LOGS ARE MOVED to the chipper on live chain in bottom of trough that runs along lower edge of declined steel log deck. Logs fall over end into chute, go to chipper.

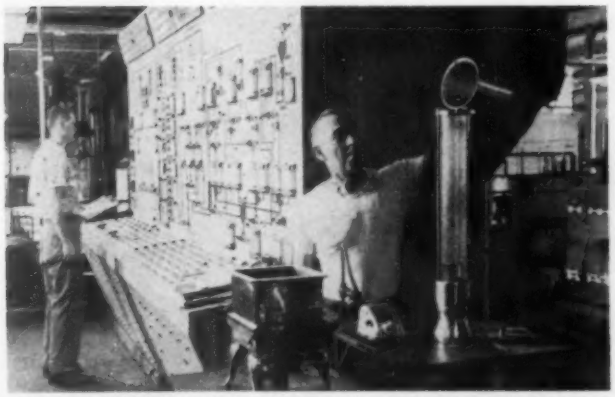
CHIP CONVEYOR as viewed from the pulpwood yard above. It leads up to the three concrete storage silos behind the large Marks double-cone clarifier. Chemicals are transferred from railroad tank cars in the four metal silos in the center. Below is an interior view showing the Webster single-belt chip conveyor extending to the chipper house.



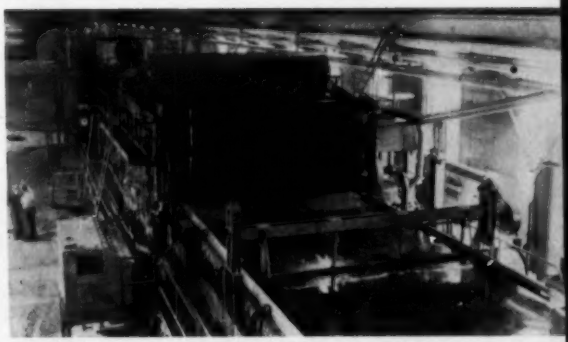
CHIP STORAGE SILO base. Conveyor belts along either side of adjoining silos can convey chips from any combination of the pine, oak and mixed hardwoods used.



BAUER REFINER, one of four used. Each is powered by a 600-hp motor. The refiners convert the digested chips into board-producing fibers.



CENTRAL CONTROL PANEL with graphic layout of system lighted at strategic points was engineered by Taylor Instrument Co. At this location, technicians can oversee, adjust and sample material formations at each stage of the process to assure a quality product.



SLURREY END of the Bagley-Sewall fourdriner. Note the puddler bar in the foreground. This machine separates the fibers from the water on moving screens.

FOR MORE ON BARRETT BOARD PLANT SEE PAGE 62

BOARD PLANT OPERATES *(Continued)*

WET CUTOFF SAW is a Coe unit. It makes a right angle cut while the wet sheet continues over rollers. Colter blade follows saw in cut.

COE GAS-FIRED DRYER at the infeed end. The 319-foot long unit alternately takes 12-foot, 6-inch by 24-foot, 6-inch sheets.

and were poured continuously. Each silo is 25 feet in diameter and 65 feet high, and each has a capacity of approximately 100 tons of chips. There are three silos because of the species separation—one for pine, one for oak, and one for mixed hardwoods.

MAKING BOARD: Basically, the actual manufacturing process consists of digesting the chips, refining, forming the board, drying, and converting the finished product.

Chips are discharged from the storage silos as selected. This can be from any one, two, or all three silos simultaneously. By properly blending pine, oak, and mixed hardwoods, desired properties of final board can be obtained. Parallel conveyor belts tap each silo, receiving chips on either side from the conical steel bottoms via a Link-Belt rotary feeder.

Each conveyor belt serves one of the two Black-Clawson Pandia digesters. Chips are automatically weighed on the conveyor by Bell Aircraft equipment so that accurate account of consumption can be kept.

The digesters are the continuous type and consist of screw feeders, single retention tube cooking units, and special dischargers. The latter provide continuous blowing of the softened chips. Introduced with the steam is a caustic solution for additional softening action.

Softened chips are blown to two cyclones and thence to the refiners. Refining is done in four Bauer double-disc refiners arranged in parallel. Duplicate equipment is used throughout the pulping system to allow parallel pulping of the different wood species. One set of equipment generally operates on pine and the other on either oak or mixed hardwoods. Consistency of the pulp is controlled at the head mixing box on the way to the forming machine.

All the operations from the discharge from the storage silos to the mixing box stage are supervised by one man and an assistant. This is made possible by a central control panel, built by Taylor Instrument Co., which shows a graphic layout of the entire system, with signal lights at all strategic locations.

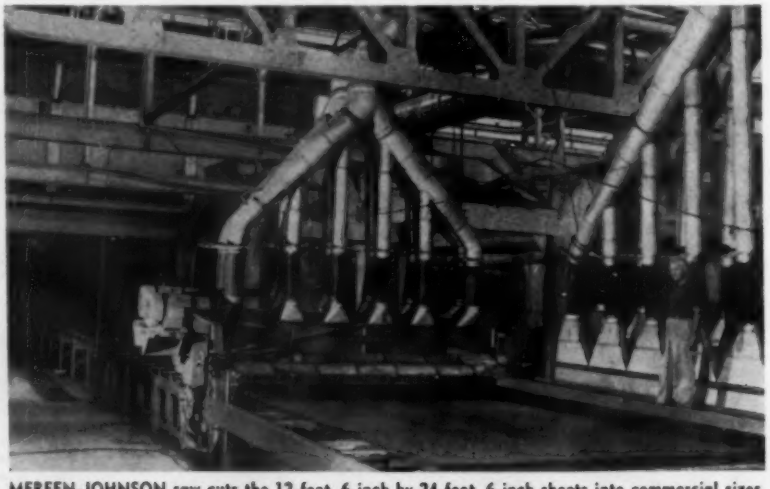
Actual forming of the board is done on a Black-Clawson Fourdrinier. This machine uses wire mesh 168 inches wide and forms a sheet 162 inches wide. This machine runs at approximately 25 f.p.m. At the slurry end of the forming machine, about the middle of the fourdrinier frame, is a puddler bar which, by an up and down motion, serves to reduce agglomerates of pulp and improve surface formation.

The process of water removal is accomplished by the action of two Rotabelt suction boxes in addition to natural drainage through the wire mesh. Additional water is removed by the rolls of the four presses as the mat passes through the forming machine. An electronic gauge automatically controls the thickness of the board being formed.

The formed board remains in a continuous sheet 12 ft. 6 in. wide until it reaches a Coe electrically driven cutoff saw. As the sheet passes over the power driven rolls of the horizontal cutoff table, it strikes a limit switch which, in turn, activates the saw. This saw travels a diagonal track but is synchronized with the passage of the board in such a way that it makes a right angle cutoff. The board is cut into lengths of 24 ft. 6 in.

The cut-to-length boards next enter the 319-foot Coe gas fired dryer. Loading mechanism automatically levels itself to any one of the 8 decks. Each piece of board is conveyed through the dryer on the deck level at which it enters. Passage of ½-inch board takes approximately two hours. Boards enter the dryer at 65% to 75% moisture, and emerge at 5% maximum moisture.

(Continued on page 65)



MEREEN-JOHNSON saw cuts the 12-foot, 6-inch by 24-foot, 6-inch sheets into commercial sizes. The boards make right angle directional changes to pass through both sets of saws.

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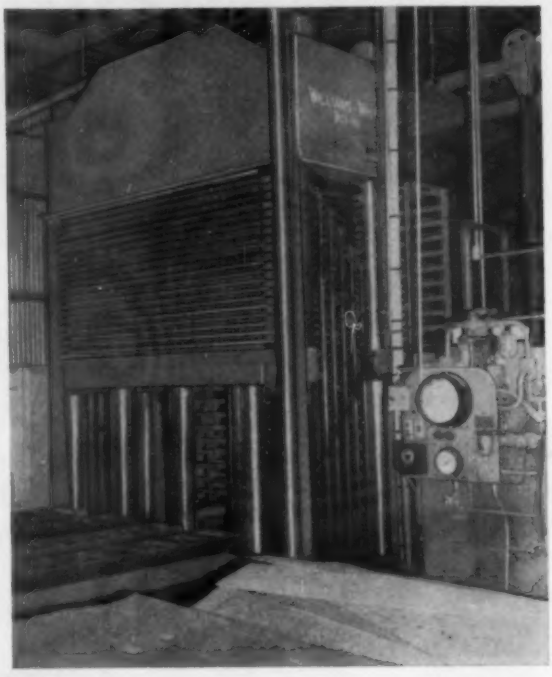

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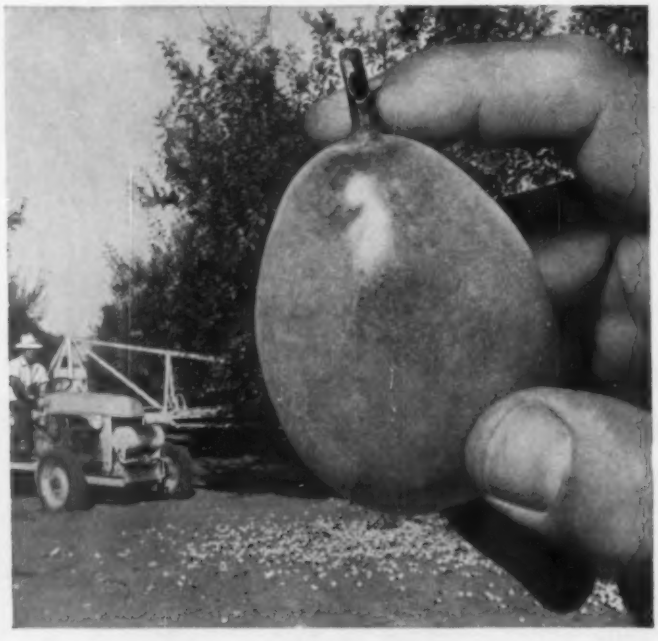
How Long Distance makes money and saves money for business

Fruit firm picks off $22-million plum by telephone

report Joe Marguleas and Frank Heggblade, of **Heggblade-Marguleas,** San Francisco, shippers of fruits from California



"Most all our selling is by phone," says Mr. Marguleas. "It's the only way we can stay in fast, personal touch with our 350 customers across the U. S. and in Canada. In a business of highly perishable products and volatile prices, Long Distance moved 7,600 shipments (worth $22 million) for our growers last year."

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San Diego	Kansas City	$2.05	.55
Eugene	Denver	$1.70	.45
Sacramento	Boise	$1.20	.30

(Weekday, station-to-station rates, excluding tax.)

Pacific Telephone

BOARD PLANT *(Continued)*

At the dry end a timing device controls the discharger insuring single delivery of the dried pieces to declined roll conveyors so that no overlap occurs. The sloping conveyors merge at a transfer point where each board is picked up on a horizontal conveyor leading to the trimmers.

The two Mereen-Johnson No. 435H combination trimmers and dusters are situated at right angles to each other. The first unit cuts the board into thirds, each 50 inches wide. The 25-foot-long pieces then move at right angles to pass under the second trim unit which cuts them into nominal 12-foot lengths. Trims are broken as they are cut and are conveyed by vacuum back to the broke system to be reprocessed.

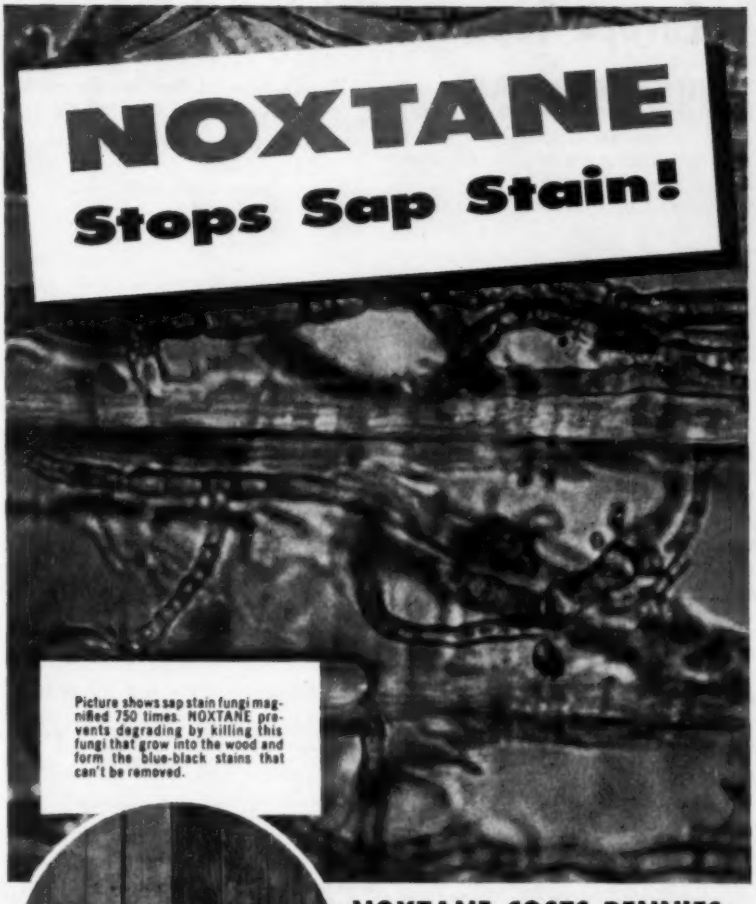
FINISHING: There are actually four departments in the finishing end. These are basically: laminating, coating, painting, and tile making. The main volume of production is laminated insulation board, 2x4 feet, in thicknesses up to two inches. The laminating operation is fully automatic. Adhesive is applied on a Black Bros. spreader, and the boards are accumulated in a stacker-elevator made by American Manufacturing Co.

When the stacker is full, the boards are conveyed to a cold press. After the glue is set, an unstacker separates the laminated units and they are conveyed to retrimmer saws.

The boards that go into insulating tiles travel a separate conveyor system and pass through paint applicators and paint dryers. The painted boards are then trimmed to appropriate sizes and conveyed to a special department to be drilled and beveled.

Other products are diverted from the basic trimmers to their respective conveyor lines. These lead to coating sections where asphalt and other treatments are applied on a production line basis. All final products are wrapped or strapped before being shipped.

An unusual detail in the Sunbury operation is the close supervision exercised by the plant's two laboratories. A control lab continuously checks quality during production while a service lab checks performance under actual service conditions. Board is tested for tensile strength, water absorption, insulation ("k" factor), density, porosity, and many other characteristics. Because the plant is almost completely automatic, personnel can devote almost their entire attention to checking and inspecting all phases of the manufacturing process. [END]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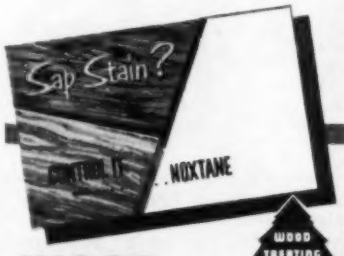

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Europe Tops Particleboard Output

THERE ARE FOUR TIMES as much hardboard and softboard manufactured in the world today as there is particleboard, according to the latest incomplete and unofficial data. The comparison is, roughly, 750,000 tons of particleboard per year vs. 3,000,000 tons of hard and soft board.

Particleboard had its beginning in Bremen, Germany, in 1941, in a small plant making 10 tons per day from spruce chips and phenolic resin binder. The raw material shortages occurring after World War II stimulated the Germans to develop new products to extend the available resources. The UK and Switzerland and other countries followed with experimental boards of their own. The Swiss marketed their first three-layer particleboard in 1945.

Today worldwide there are an estimated 250 particleboard plants, a small percentage of which use non-wood raw materials. Of this 250, an estimated 15-20% of the plants utilize the extrusion process, which was developed in Germany (USSR is excluded in these figures.)

The UN's figures for 1956 show a comparison of countries and the number of board plants either operating and under construction. In the accompanying table the mark + indicates that there are known to be more plants than are shown.

Particleboard's long-range permanent success as a commodity depends on: (1) its price in relation to competitive materials, and (2) the extent to which new applications can be found.

Phenomenal growth in particleboard is illustrated in the accompanying table. Note that Europe holds the top position. This is the only major wood product of the world in which Europe holds such pre-eminence.

The above information is a condensation of information compiled by the Forestry Division of the Food & Agricultural Organization.

Production of Particle Board by Countries of the World

Figures given in thousand metric tons.

	1956
Germany (Western)	162
United States	125
Belgium-Luxembourg	90
France	49
Canada	30
United Kingdom	29
Italy	26
Austria	23
Spain	21
Germany (Eastern)	19
Netherlands	13
Denmark	8
Finland	7
Czechoslovakia	5
Turkey	4
Sweden	3
Mexico	3
Brazil	3
Japan	2.7
Colombia	2
Uruguay	2
WORLD TOTALS	705*

* (Includes other minor producers not shown above.)

Source: UN-FAO

Particleboard Plants By Country

Europe		U S A	58
Austria	5	U S S R	Several
Belgium	9	Oceania	
Bulgaria	1	Australia	1
Czechoslovakia	1+	New Zealand	1
Denmark	1	Africa	
Finland	5	N. Rhodesia	1
France	19	Union of S. Africa	3
W. Germany	47+		
E. Germany	6+	Asia	
Hungary	1	Israel	2
Italy	5	Indonesia	1
Netherlands	9	Japan	7
Norway	3	Taiwan	1
Poland	2	Thailand	1
Rumania	1	Turkey	1
Spain	1	Latin America	
Sweden	4	Argentina	1
Switzerland	9	Brazil	1
U K	8	Chile	1
Yugoslavia	+	Colombia	3
North America		Mexico	1
Canada	3	Uruguay	1
World Total:			226 Plus

Japanese Hardboard and Particle Board Production Since Inception

Unit: Metric Ton

Year	Hardboard	Particle Board
1950	6,730	–
1951	8,005	–
1952	8,118	–
1953	8,321	516
1954	10,896	2,439
1955	14,938	3,381
1956	17,788	6,095
1957	23,285	11,645

Source: Forestry Agency, Ministry of Agriculture and Forestry.

Estimated World Output of Particleboard, 1950 to 1956 (in thousands of cubic meters)

Region	1950	1951	1952	1953	1954	1955	1956	1958 (est)
Europe	10	40	80	120	270	450	775	2077
North America	10	15	30	80	120	180	240	750
Oceania							2	25
Africa				5	15	25	50	75
Far East				2	5	8	12	46
Near East							6	20
Latin America					1	5	16	64
World:	20	55	110	207	411	668	1101	3137

Fiberboard Shows Production Gains

IN THE OVERALL WORLD PICTURE, fibreboard represents an important segment of the forest industries and is an important commodity in international trade. Like particleboard, it has achieved its greatest prominence in recent years, as a result of rapid expansion in production and improvement in technology since World War II.

Fibreboard is a collective term used to denote both hardboard and insulation board; the latter is often referred to as softboard as well. It is felt, however, that these terms alone are no longer adequate to describe the range of products and their uses. It has been recommended that the terms "compressed" and "non-compressed fibreboard" be adopted, and it is likely that such will be done in Europe. The UN-FAO states that these terms are technically sound, understandable by the consumer and provide non-conflicting subdivisions.

In the last decade, output of fibreboard has expanded all over the globe. In 1955, world production topped the 3 million ton mark for the first time; world capacity for that year is estimated at 3.5 million tons.

Though still the largest individual producer, the U. S. now accounts for less than half the world output of fibreboard. It makes 65% of the insulation board but only 29% of the hardboard. Production of hardboard has risen much more quickly than that of insulation board, so that hardboard now accounts for over half of all fibreboard produced in the world.

EXPANDING PRODUCTION in the fibreboard field is taking place in all parts of the world, mainly North America, northern Europe, eastern Europe, USSR and Japan. By the end of last year, Asian capacity was to exceed 80,000 tons, with the completion of new projects in Japan, Philippines and Formosa. USSR's capacity is planned to reach some 430,000 tons by 1960. Capacity targets are up in Poland and Czechoslovakia. The UN says, "It seems almost certain that by the end of the current decade world capacity will have risen to 5 million tons, of which probably close to 3 million tons will be hardboard."

In the trade picture, an estimated one-sixth of all fibreboard produced enters into international trade, with

(Continued on page 68, third column)

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U. S., Sweden Tops In Hardboard Output

U. S. and Sweden rank 1-2 in the production of hardboard among countries of the world, according to the figures for the latest year available, 1956. Final 1957 figures have not as yet been issued.

Increase in hardboard production has not been so spectacular as that in some of the other fields. The 1956 world totals (a new all-time record) show a 6% jump over 1955 as against 14% in 1955 vs. 1954. This steady growth is reflected around the entire globe.

The years 1957-58 will show some interesting results when production figures are made public, sometime well into the future. New plants have gone on the line in U. S., Australia and Turkey while many companies throughout the world increased capacity.

●

Japan Adds Plants

There are in early 1958 eight hardboard and five particleboard plants in Japan, reports Kenji Sakai, THE LUMBERMAN'S correspondent in Tokyo. Most of the board producers are tied in with plywood plants, which now number approximately 200. Several new board ventures are about to materialize. The estimated total tonnage to be produced during 1958 is 50,000 metric tons for hardboard and 100,000 metric tons for particleboard.

Fiberboard Shows Gains

(Continued from page 66)

Sweden accounting for over half of all exports. UK has consistently been the largest importer, taking over 50% of Europe's imported board.

Price-wise, fibreboard over the last 20 years has risen much less than that of forest products and has been subject to less serious fluctuations. In fact in relation to general commodity prices, fibreboard has become progressively cheaper.

FIBREBOARD'S FUTURE looks good. These products are capable of making a considerable contribution towards raising the living standards of the less-developed regions of the world. In many countries in these regions, consumption is likely to remain at very low levels so long as they have to rely entirely on imports. Any expansion of domestic capacity in these countries should stimulate a healthy consumption.

Production of Hardboard by Countries of the World

Figures given in 1000 metric tons; suggested formula for converting to square foot basis is 1 metric ton equals 2939 sq. ft.

	1956	1955	1954
United States	500	470	447
Sweden	370	353	302
Germany (Western)	91	80	64
Australia	85	80	62
Canada	69	62	48
Finland	66	72	63
France	66	59	56
Norway	55	54	53
Belgium	43	39	39
USSR	40	32	80
Austria	35	34	34
Italy	34	34	34
Poland	31	22	22
Germany (Eastern)	26	19	13
Czechoslovakia	23	24	21
United Kingdom	22	21	21
Argentina	18	15	15
Japan	18	15	9.9
New Zealand	12	14	12
Spain	11	11	10
Ireland	9.3	9.1	9.1
Union of South Africa	***	55	25
Mexico	***	10	10
WORLD TOTALS	1745	1640	1440

(Includes other minor producers not shown above.)

***Figures not available.

Source: UN-FAO

Exports & Imports of Hardboard By Leading Countries of the World
Figures given in 1000 metric tons
1 metric ton equals 2939 sq. ft.

Exports

	1955	1956
Sweden	260	300
Finland	61	49
Norway	27	36
Belgium-Luxembourg	35	28
Austria	23	20
Canada	43	35
W. Germany	17	14

Imports

	1955	1956
United Kingdom	171	149
Netherlands	56	64
U. S. A.	21	22
Belgium-Luxembourg	20	18
Canada	21	30
W. Germany	20	30
Denmark	25	23
France	15	21

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United Kingdom Expands Board Output

Considerable expansion of the United Kingdom board trade is taking place, in spite of dull conditions on the market in the first half of this year. This setback to sales will be purely temporary, for the use of board is increasing rapidly. Imports of hardboard last year were 163,000 tons, showing an increase of 38,000 tons over the year before, while insulation board imports increased from 21,000 tons to 22,000 tons. Particleboard output in the U.K. has been increasing, the imports being small.

This coming year will see the operation of a new act which makes effective insulation of industrial buildings compulsory, and soon new laws are to be made governing new houses. This will increase the market for insulation board considerably, especially now that flame-proof board has been developed. Experiments have devised a successful way of treating insulation board with a fire retardant so that it can be worked and cut without losing any of its flame-proof properties. Other insulation boards with asbestos covering have also been introduced.

Most of Britain's hardboard is imported, but plans are being completed for a larger production in the U.K. A new Celotex hardboard plant has been opened, at a cost of about $3 million, which will produce 11 different types of hardboard in thicknesses ranging from 1/10 to 5/16-inch. Some of this production is designed for export markets, the boards being treated to tropical conditions.

The new P.D. insulation board mill, just completed at a cost of $1.5 million, has an output of 100,000 square feet daily (based on ½-inch insulation board), and production is now concentrated upon thicknesses of ½, ¾ and 1-inch. The output of insulation board in Britain is now running at a rate of about 145 million square feet a year, and additional plant will be coming into production this year.

Particleboard production in Britain is also increasing rapidly. By next year one firm — Airscrew Company and Jicwood, Ltd.—will have an output of over 35 million square feet annually of particleboard. At the moment $750,000 is being spent on new particleboard machinery for their Weybridge factory, and the improved automation particleboard plant in Scotland is turning out 15 million square feet of three-layer particleboard a year. Recently new machinery was brought into the Scottish plant to step up output by a third, but there is still an unsatisfied demand for particleboard in the U.K.

New trade associations have been formed for these trades. There is the British Wood Chipboard Manufacturers' Association to look after the particleboard interests, and the Wallboard Importers', Distributors' and Merchants' Association was disbanded because the importers and retailers could not agree, and two new bodies have been set up — the Imported Fibre Building Board Federation and the Wallboard Distributors' Association.

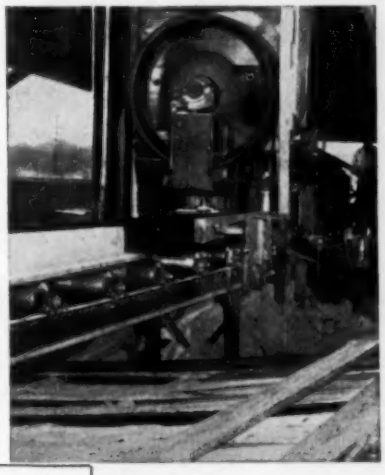
Elects Officers

The Florida-Georgia Pine Producers have elected Robert Balfour, Balfour Lumber Co., Thomasville, Ga., as president. He had been acting as temporary chairman of the group.

Dan Lewis, Tallahassee Lumber Co., Tallahassee, Fla., was named vice-president and A. W. Skoropat, Langdale Co., Valdosta, Ga., selected as secretary-treasurer. The excutive committee of the group includes the officers and Jerry Dickert, Perry Lumber Co., Perry, Fla., and M. C. McCall, McCall & Barineau Lumber Co., Tallahassee.

Green 8/4 lumber split at rate of 65M to 70M feet per 8 hour day on

McDONOUGH 54" Vertical Band Resaw



PERRY LUMBER COMPANY of SELMA, Inc.

TELEPHONE 2012 2231 P. O. BOX 476

Selma, North Carolina May 27, 1957

Dillon Supply Company
216 South West Street
Raleigh, North Carolina

Attention: Mr. John H. Hiravelle, Assistant Vice President

Gentlemen:

We thought that you would like to know how pleased we are with the performance of the new Style McDonough Band Resaw which we are now operating.

As you know, our Plant and our Associate Plants have been operating the McDonough Band Resaws for a number of years. We installed the New Style Machine which includes the Cast Top Wheel Assembly that has the Timken Roller Bearings mounted in the wheel, the new Double Column Straining Device, and all other new features, on July 11, 1956. This machine is equipped with 7" wide Wheels and we are using 8" wide Bands 17 Gauge on it. We also equipped it with a Power Opening and Closing Device.

This machine is operating in a concentration yard. We are splitting green 8/4 lumber at a rate of 65,000 to 70,000 Ft. per 8-hour day.

We have not had any service problems at all with it and feel that the new machine is the finest Resaw of its type we have ever operated and we are pleased that we installed this machine at our Plant.

Very truly yours,
PERRY LUMBER COMPANY OF SELMA, INC.
A. L. Perry

After the first year's operation of this new style McDonough 54" Vertical Band Resaw this long-time McDonough user says,

"We have not had any service problems at all . . . and we feel that the new machine is the finest Resaw of its type we have ever operated . . ."

This machine is completely modern, not just a "face lifting" job, designed to meet today's requirements for more production with greater accuracy and less maintenance.

Check and compare the new McDONOUGH 54" Vertical Band Resaw . . . see the many features that will help you produce more feet of better lumber at lower cost.

Ask your McDONOUGH Dealer for Bulletin 54-3 with complete description, illustrations and specifications or write direct TODAY.

McDONOUGH MANUFACTURING CO.

1502 GALLOWAY EAU CLAIRE, WISC.

Announcing

NEWER and LARGER PLANT TO BETTER SERVE YOU

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OUR NEW PHONE NUMBER:

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OUR NEW CUSTOMERS:

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ASHTON LUMBER COMPANY
Ashton, Idaho

WYNNDEL BOX & LUMBER COMPANY, LTD.
Wynndel, B. C.

MOUNTAINSIDE SAWMILLS, LTD.
Westbridge, B. C.

ABORIGINE LUMBER COMPANY
Ft. Bragg, California

PARK LUMBER COMPANY, Inc.
Estacada, Oregon

COOKE LUMBER CO., Ltd.,
Greenwood, B. C.

Oregon Dryer Company

We invite your inquiry!

Call us collect!

AT MIDYEAR: THE UPTURN

(Continued from page 33)

Georgia-Pacific's new pulp plant and stud mill at Toledo, Ore.; U. S. Plywood's new plywood plants at Roseburg, Ore. and at Orangeburg, S. C.; Dwyer Lumber Co.'s new plywood plant, Portland, Ore.; Crown Zellerbach's new sawmill in British Columbia; modernization, Fordyce Lumber Co., Fordyce, Ark.; modernization, Olin Mathison, Huttig, Ark.; the big new plant of Brooks-Scanlon, Inc., Bend, Ore.; Diamond-Gardner Corp., extensive new operations at Red Bluff, Calif.; Abitibi's new hardboard plant at Alpena, Mich.; new Templeboard insulation board plant in east Texas. The list runs into hundreds. These are not even a handful.

HOUSING START STATISTICS are encouraging. At the National Plywood Distributors Association meeting in Coronado, Calif. in late June, Cyrus B. Sweet, deputy administrator, FHA, stated that they had readjusted their thinking on housing starts for 1958, which would be between 1.2 million and 1.3 million starts. "Home building right now is one of the brightest spots in the business outlook," he said. There is a marked about-face in the mortgage market. Investors are seeking more mortgages than seem to be available. Liberal FHA and VA home-financing terms are bringing more families into the housing market. Builders are revising their building plans upwards. Better quality homes are being produced through improved materials and construction techniques. The volume of FHA home mortgage insurance applications has been rising steadily each month this year. A new all-time high was established in May, with home mortgage applications covering more than 90,000 units.

THE MIDYEAR OUTLOOK IS GOOD for the American businessmen who are willing to go ahead, adapt to conditions, find out what the consuming public wants and give it to them. There are plenty of production facilities; there is plenty of money available. While it may not be spectacular, the business is there, and it will grow, for those who are willing to analyze their markets, provide quality and maintain an undiminished faith in our American way of life. [END]

Cooperative Effort in the Industry

Lumber industry leaders representing manufacturers, wholesalers and retailers met recently in Colorado Springs, Colo., to discuss the selling and merchandising of lumber through united effort. The meeting came as the result of cooperative effffort by James C. O'Malley, president, National Retail Lumber Dealers Association; N. F. McGowin, president, National Lumber Manufacturers Association; and Martin Wiegand, president, National-American Wholesale Lumber Association.

It was the first meeting of this nature in many years, and the consensus of those present, after a full day's discission of mutual problems, was that future meetings should be held periodically.

Discussion centered on more effective merchandising and selling of wood products and in more effective promotion programs in which the joint efforts of the three branches could be extended to broaden the markets for lumber and wood products.

Specifics discussed included

- Building components of wood.
- Research affecting housing and housing costs.
- More effective management training.
- Joint advertising potential of the industry.
- Reducing handling costs of wood products. [END]

Lumber Prices

Douglas Fir

1x8	Utility S4S KD	$ 52- 55.00
2x4	Construction Dimension S4S KD	79- 81.00
1x4	C&Btr VG Flooring KD	170-173.00
1x6	C&Btr Drop Siding KD	150-155.00
1x6	C&Btr S4S KD	170-175.00
1x8	C&Btr S4S KD	170-175.00
1x10	C&Btr S4S KD	170-175.00
1x12	C&Btr S4S KD	215-220.00

Construction Timbers and Plank

3x12	6-20′	$ 80- 83.00
3x12	22-24′	85- 88.00
3x12	26-32′	93- 98.00
4x4	8-20′	81- 84.00
4x4	22-24′	86- 89.00
4x4	26-32′	94- 99.00
6x6	8-20′	77- 80.00
6x6	22-30′	84- 87.00
6x6	32-40′	99-102.00
8x8	8-20′	76- 79.00
8x8	22-30′	81- 84.00
8x8	32-40′	96- 99.00
6x10, 8x10, 10x10, 12x12	8-20′	74- 77.00
6x10, 8x10, 10x10, 12x12	22-30′	79- 82.00
6x10, 8x10, 10x10, 12x12	32-40′	94- 97.00
Crossties		55- 58.00

Construction Dimension (Green)

2x4	6-24′	$ 65- 68.00
2x6	6-24′	67- 70.00
2x8	6-24′	66- 69.00
2x12	6-24′	66- 69.00

Standard & Btr. Boards (Green)

1x4	6-20′	$ 44- 47.00
1x8	6-20′	56- 59.00
1x12	6-20′	56- 59.00

Douglas Fir Plywood

¼-inch AD SOIS	$72.00

Southern Pine (KD Stock)

Vertical Grain Flooring

	BB	C	D
1x4	$195.00	$180.00	$153.00

Flat Grain Flooring

1x4	145.00	135.00	125.00
1x6	175.00	155.00	120.00

Drop Siding

1x6	No. 106	183.00	163.00	127.00
	No. 116	183.00	163.00	127.00

Boards and Shiplap

	1x6	1x8	1x10	1x12
No. 1	120.00	122.00	127.00	172.00
No. 2	77.00	83.00	81.00	97.00
No. 3	65.00	75.00	71.00	72.00

No. 1 Dimension

	12	14	16	18	20
2x4	94.00	94.00	94.00	115.00	115.00
2x6	95.00	96.00	93.00	110.00	110.00
2x8	90.00	88.00	88.00	108.00	108.00
2x10	105.00	97.00	99.00	120.00	120.00
2x12	115.00	105.00	107.00	120.00	120.00

No. 2 Dimension

	12	14	16	18	20
2x4	87.00	87.00	87.00	103.00	103.00
2x6	88.00	88.00	86.00	98.00	98.00
2x8	85.00	85.00	83.00	97.00	97.00
2x10	87.00	89.00	87.00	100.00	100.00
2x12	90.00	90.00	88.00	105.00	110.00

Western Pine

Ponderosa Pine

Selects S2 or 4S	4/4 RW	5/4 RW	6/4 RW
C Select RL	$252.86	$260.40	$255.88
D Select RL	157.56	175.52	161.69
Shop S2S	**No. 1**	**No. 2**	
5/4	$128.30	$ 94.93	
6/4	127.72	95.55	
Commons S2 or 4S	**No. 2**	**No. 3**	
1x8" RL	$100.57	$ 68.62	
1x12" RL	116.06	74.06	
4/4 No. 4 Common S2 or 4S			$ 49.68

Idaho White Pine

Selects S2 or 4S	4/4 RW	6/4 RW
Choice (C) RL	$268.68	$292.00
Quality (D) RL	164.67	253.10

Commons S2 or 4S	Col. (1)	Ster. (2)	Std. (3)
1x8" RL		$138.90	$ 87.08
1x12" RL		162.50	91.29
4/4 Utility (4) S2 or 4S RW&L			$ 54.96

Sugar Pine

Selects S2 or 4S	4/4 RW	5/4 RW	6/4 RW
1 & 2 Clear RL	$284.44	$286.01	$288.92
C Select RL	274.90	275.68	277.82
D Select RL	188.38	190.11	198.37
Shop S2S	**No. 1**	**No. 2**	**No. 3**
5/4	$133.06	$ 97.42	$ 66.36
6/4	131.22	96.83	64.86
8/4	148.87	107.73	66.58

Larch-Douglas Fir

4/4 No. 3 Common S2 or 4S	$ 62.53
2x4 No. 1 Dimension RW&L	72.90
2x4 No. 2 & Btr. Dimension RW&L	67.06

New Industry Firm

Lumbermans Acceptance Co., a loan brokerage business, has been established by A. J. Gagliardi and I. T. Allison under the authority of the division of corporations. It will specialize in short term credit to the lumber industry in northern California, will have headquarters at Santa Rosa, Calif. Gagliardi has experience in timber investments and lumber manufacturing in Oregon, Washington and California. Allison is a public accountant from northern California.

NICHOLSON 34" DEBARKER

From NICHOLSON . . . the most advanced in a line of heavy duty ROTOBARKERS especially designed for rugged western operations. Barking logs from 4" to 34" diameters—minimum 5′ lengths—at speeds up to 120′ per minute, the ROTOBARKER offers quick, in-operation, barking pressure adjustments, thus assuring minimum fibre loss. Other ROTOBARKER sizes easily handle logs up to 72" in diameter.

Over 200 NICHOLSON barkers are now in use.

Investigate the new NICHOLSON Coon Hound barkers built for lower production operations.

This machine handled under one or more of the following patents: 2688349, 2802494, 2802495, 2802496.

For further information write to:

N *for the best in Log Barkers*

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A new sawmill? Make it a Mater Automation Mill!

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LUMBER • TIMBER • FOREST PRODUCTS STOCKS

LA SALLE SECURITIES CO., INVESTMENT SECURITIES, 208 LA SALLE STREET, CHICAGO, ILL.

NOMINAL QUOTATIONS • JUNE 18, 1958

STOCKS	Paid 1957	This Month Bid	This Month Ask	Last Month Bid	Last Month Ask
Ambassador Oil Com.	$	3¾	4½	3¾	4½
American Forest Products Com.	1.00 &S	19½	20½	19	21
Anderson Tully Co., Common	40.00	250	OW	250	OW
Biles-Coleman Lbr. Co. Com.	*	17	OW	17	OW
Boise Cascade Corp. Com.	.50	23	25	21½	23½
Booth-Kelly Lumber Co. Com.	30.00	650	OW	650	OW
George E. Breece Lbr. Units	.05	2½	OW	2½	OW
Brooks-Scanlon, Inc. "A"	.95	22	OW	23	OW
Brooks-Scanlon, Inc. "B"	.95	23	OW	23	OW
Calaveras Land & Timber Co. Com.	2.00	19½	22	19	21
Cascades Plywood Co. Com.	1.25	25	27	25	27
Central Coal & Coke Co. Com.	1.00	27½	29½	27½	29½
Cherry River Boom & Lbr. Com.	2.00	29	OW	35	OW
Chicago Mill & Lbr. Co. Com.	1.25	24¾	26	25	26½
Cloquet Lumber Co. Com.	*	1	OW	1	OW
Consol. Naval Stores Common	20.00	590	OW	580	OW
Crossett Company, Com. "A"	.60	26½	28	26½	28½
Crossett Company, Com. "B"	.60	26½	28	26	28
Curtis Companies Com.	.10	7	8	7	8
Dierks Forests, Inc. Com.	5.00	110	OW	110	OW
Edward Hines Lumber Co., Com.	2.50	34½	36	35½	37
Fordyce Lumber Co., Common	1.25	35	OW	35	OW
Holmes Eureka Lumber Com.	.10	2½	3½	2½	3½
Insular Lumber Co. Com.	1.25	12	14	12½	14½
Keyes Fibre Co. Com.	1.20	20½	22	20½	22
Kirby Lumber Corp. Com.	1.00	38½	40½	38	41
Longview Fibre Co. Com.	2.80	63½	OW	63	OW
Louisiana Central Oil & Gas Co. Com.	12.00	50	OW	50	OW
Louisiana Long Leaf Lumber Co. Com.	20.00	70	OW	70	OW
Louisiana Sawmill Co. Com.	.....	½	OW	½	OW
McCloud River Lumber Co. Com.	4.00	60	65	59	62½
McClour River Railroad Co., Com.	1.00	28	32	29	32
Meadow River Lumber Co. Com.	*	200	OW	200	OW
Medford Corp. Com.	7.00	155	OW	160	OW
Mississippi Land Co., Com.	2.40	12	OW	12	OW
Northwest Paper Co. Com.	.80	26	29	26	28
O. & N. Lumber Co., Common	3.00	42	OW	45	OW
Olin Oil & Gas Co. Com.	.....	19	20	16	17
Ozan Lumber Co. Com.	*	90	OW	90	OW
Pacific Lumber Co., Common	10.00	200	OW	200	OW
Pickering Lumber Co. Com.	.55	9	10	9½	10½
Pine Tree Manufacturing Co. Common	1.26	50	OW	50	OW
Pope & Talbot, Inc. Com.	1.25	23	24½	22½	24
Pope & Talbot, Inc. Pfd.	.30	4⅝	5⅜	4⅝	5⅜
Potlatch Forests, Com.	1.00	43	46	42½	44½
Powell River Co. Ltd. Com.	1.50	34¾	36	31½	32½
Richmond Cedar Mfg. Com.	.....	½	1	½	1
Richmond Cedar Works Com.	.....	1	2	¾	1¼
Ritter, W. M., Lumber Co., Com.	2.00	40	45	40	45
Roddis Plywood Co. Com.	.45 &S	10¼	11¼	8¼	9¼
Southern Minerals Corp. Com.	.....	4¼	5¼	4½	5¼
Southwest Lumber Mills, Com.	4% Stk.	6¾	7¾	6½	7½
Tremont Lumber Com.	2.00	65	OW	65	OW
Union Lumber Co. Com.	1.25	40	45	39	42
United States Lumber Com.	.35	3⅜	4¼	3	4
Upson Company Com.	1.20	14½	15½	14½	16½
Weyerhaeuser Timber Com.	1.00	38½	40	39	40
Winton Lumber Co. Com.	*	15	OW	15	OW
Wood Conversion Co. Com.	.40	12	13	12	14

*Information not available BW—Bids Wanted S—Stock
OW—Offerings Wanted C—Last sale on Exchange where listed or bid.

THE ABOVE INFORMATION, WHILE NOT GUARANTEED, IS OBTAINED FROM SOURCES WE BELIEVE TO BE RELIABLE

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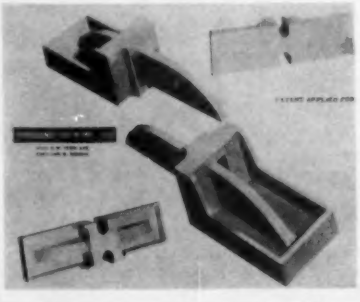
EASY INSTALLATION . . .
SECURE FASTENING . . .
MAXIMUM STRENGTH . . .

"PORTALLOY is to chain as COPENHAGEN is to snoose"



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THIN HIGH SPEED PLANER
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SHAPER STEEL

For all makes of woodworking machinery

THE OHIO KNIFE CO.
CINCINNATI 23, OHIO

Metal Detector *Save Machinery! Stop the Accident Before It Happens*

SCR-625 ARMY MINE DETECTOR

Recommended by U. S. Forestry Service and in numerous articles for finding concealed metal in logs and timber products. The Dautzler Lbr. Co., Perkinston, Miss., reports an estimated savings of $5,000 to $6,000 yearly. Write us for copy of free report of U. S. Forestry Service.

The SCR-625 is a portable instrument which may be used in the field to give an audible indication of buried metal in logs, underground, or in water. It may also be connected permanently with suitable automatic control devices for stopping machinery should imbedded metal in logs be encountered.

Detector is shipped in handy portable carrying case with instructions and ready to operate except for batteries. Ship. wt. 55 lbs. Our recent Government surplus purchase allows the present low price of $79.50 ea.

Batteries, per set—$6.27. Special price to quantity users or dealers upon request.

We maintain service and parts of the SCR-625. Parts price list on request.

ESSE RADIO COMPANY
42 W. South Street Indianapolis 25, Indiana Phone: Melrose 4-8328

HARDBOARD ASSOCIATION EXECUTIVES. In attendance at recent semi-annual meeting of the Hardboard Association in Portland, Ore., were these officers, from left sitting: Paul B. Shoemaker, Masonite Corp., treasurer; Arthur VanderSys, Evans Products Co., director; Kenneth Hafener, Superwood, director; James Tisdale, Hines Lumber Co., vice-president; A. J. Watts, U. S. Gypsum Co., president; Walter Walling, Georgia-Pacific Corp., director; Robert Pauley, Weyerhaeuser Timber Co., treasurer. Standing, from left: Tom Hughes, Forest Fiber Products, director; Donald Linville, executive secretary; Robert Keck, association attorney. The group voted to expand its promotion budget to secure new markets for expanding production capacity.

Hans Slagsvold Retires, Jorgenson Takes Post

Hans Slagsvold has retired as superintendent of the Brooks-Scanlon, Inc., sawmill at Bend, Ore., ending 40 years with the firm. He will be succeeded by Ernest Jorgenson who previously served as division manager for the Southwest Lumber Co. at McNary, Ariz.

Jorgenson's background includes work at the Panhandle Lumber Co., Spirit Lake, Ida., and with the Gilchrist Timber Co., Gilchrist, Ore., before joining Southwest where he served under Freeman Schultz, now general manager of Brooks-Scanlon.

●

Firm Adds Rep

Irving Malenky, formerly with Forest Manufacturing Corp. and the Newton Lumber Co., has joined Reisen Hardwood Lumber Co., Union, N. J. where he will be assigned to purchasing and sale of domestic and foreign woods.

Heigel New President Of Dant & Russell

Dant & Russell, Inc., Portland, Ore., has elected J. S. Heigel as president and treasurer. This action by the board of directors, reported by Thomas W. Dant, chairman, moves Heigel into the post held by George M. Syversen who resigns to look after his own interests.

Heigel, with Dant & Russell for 11 years, started in the lumber industry with Long-Bell's Ryderwood logging operations. He was later with Weyerhaeuser Timber Co.'s pulp division at Longview. He was with the George Black & Co. accounting firm in Portland, before joining Dant & Russell.

●

Kirby Promotes Brown

E. B. Brown has been appointed plant superintendent in charge of sawmill operations at Silsbee, Tex. for Kirby Lumber Co. He had previously served as assistant plant superintendent under the late A. T. McDonough. Brown formerly worked with Crossett Lumber Co., Crossett, Ark., where he was chief engineer.

●

• Paul H. Koenig is new eastern field representative for St. Paul & Tacoma Lumber Co., Tacoma, Wash.

Rader Solves CONVEYOR PROBLEMS

RADER
PNEUMATIC CONVEYORS

Pipeline carries chips, bark or other wood waste over yard, under pond and road to rail cars or other destination.

More than 80% of the high pressure systems in the Northwest wood industry are Rader conveyors, proving their economy and efficiency.

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DESIGNERS and BUILDERS
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A DRY KILN is a Profitable Investment
A BLO-R-DRY Kiln will fit your operation
Increase the value of your present production
Pick up the spread between KD & Green
Plus gains on underweights
LEASE or purchase — low cash requirement
Installation at Avison Lumber, Molalla, Oregon
Owners Comment: We are entirely pleased with the economy and performance of our Blo-R-Dry.

BLO-R-DRY, INC.
GRAM DEVELOPMENT CO.
Portland Trust Bldg.
Portland, Oregon
CA 8-9770
In Canada: Canadian Sumner Iron Wks., Ltd., Vancouver, B. C.

Chemical Weed Control Possibility Told

Chemical herbicides offer possibilities of savings in time and money in weed control in storage yards, according to tests conducted in Wisconsin, Minnesota and Michigan by the University of Wisconsin.

Tests conducted by J. E. Kuntz and A. J. Riker of the university in pulpwood storage areas in Wisconsin show that diuron applied at rates of 45 to 60 pounds per acre provided good initial control with little regrowth after three years. Conditions in the yard were favorable to growth of weeds: considerable decayed wood waste and humus and ample moisture.

As the results of wood control trials, Northwest Paper Co., Cloquet, Minn., has embarked on a long range weed control program using Telvar W seed killer applied 40 pounds per acre. Control from the initial treatment has extended into the third season, making an annual cost for the chemical of $40 per acre plus original application cost.

Similar results with diuron has been obtained on experimental plots in Wisconsin by Nekoosa-Edwards Paper Co., Port Edwards, Wis.

Diuron, identified commercially as Telvar DW, and Telvar W which is the commercial name for monuron, are 80% wettable powders which are mixed with water for spraying. They have been applied in water at the rate of 200 gallons per acre, both with knapsack sprayer and with a boom sprayer mounted on a pickup truck.

●

Modernization Completed

The Long-Lake Lumber Co., Spokane, Wash., has resumed operation following a shutdown of six months during which the mill was extensively modernized, William J. Burns, vice-president and general manager, reports.

●

• A 12,000-square foot expansion is planned at Timber Products Co.'s recently completed storage and finishing building in Renton, Wash. The addition will be of heavy timber construction with 70-foot clear span Teco-connected bowstring trusses.

●

• FSP Lumber Co., Langlois, Ore., destroyed by fire last fall, is being rebuilt and will be in operation shortly.

Barker, Gang Saw Added At Willamette Valley

Increased utilization is being secured at Willamette Valley Lumber Co. through installation of a new whole log barker and a gang mill.

The new Superior 18-inch gang is designed to handle logs 12 inches and less in diameter and will allow studs to be cut from peeler cores. It will have a capacity of about 30,000 feet a day.

●

Idaho Stud Mill Starts

The Clemens Lumber Co. at Cottonwood, Ida., started production at its new Skragg mill in mid-January. C. E. Clemens says the electric plant will have an output of about 50,000 board feet of studs a day.

●

• I. L. Craik has started operation of a stud mill at Walla Walla, Wash. Chip production equipment may be added later.

●

• Timber Laminators, Ontario, Ore., a new laminated beam manufacturer, has shipped its first carload of beams.

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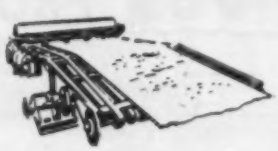

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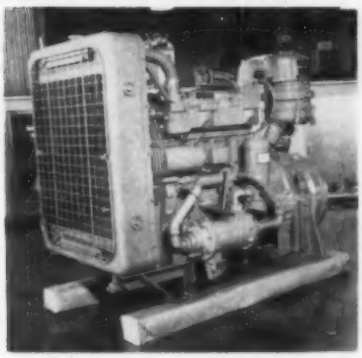


Caterpillar Announces New Diesel Engine

Caterpillar Tractor Co., engine division, has announced a new 4-cylinder, diesel engine, D311 (Series H). It has a 4-inch bore and a 5-inch stroke, is naturally aspirated with valve-in-head and employs the same precombustion chamber type design used on all Caterpillar diesel engines.

The 252 inch displacement engine develops 75 horsepower at 2400 rpm. It has an intermittent output rating of 68 horsepower and a continuous rating of 50 horsepower at 2000 rpm. The generator for use with the engine has a 30-kw continuous rating and is completely self-regulated. A turbocharger which will soon be available will considerably increase all ratings.

This engine is another in Caterpillar's trend to produce new, more powerful models with smaller dimensions than the engines they replace. In replacing the D311, the D311 (Series H) maximum output capacity has increased 10 horsepower or more than 15%. Size has been so reduced that it is nine inches shorter, 17 inches lower and weighs 350 pounds less than the D311.

●

Millman Designs Cylinders For Shotguns, Niggers

The Remco line of cylinders, available in 4- to 14-inch sizes and designed specially for shotguns and niggers, were designed by a millman and are manufactured by Remco Manufacturing Co., a division of Firco, Inc.

Remco was established by Robert Harrah, formerly operator of Harrah's Machine Works, Willits, Calif., and builder of sawmills; E. H. Maize Jr., Robert Havener, Frank Crawford and Ernest McKee, all lumbermen.

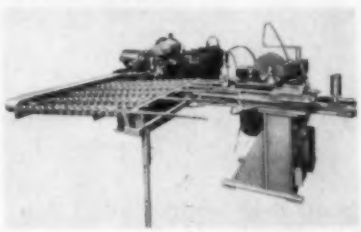
The Remco cylinder was designed at Firco, Inc., a stud mill, is of heavy construction, full cushioned, with chromed rods and Podpak packed.

Onsrud Offers Unit For End Gluing

A finger joint shaper and an assembly machine for end gluing of short lengths are available as a unit from Onsrud Machine Works, Inc.

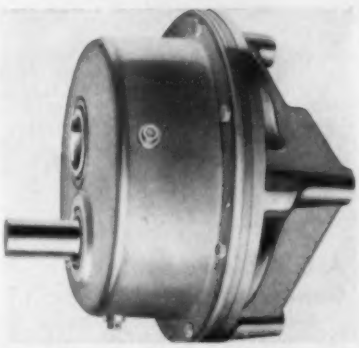
The finger joint shaper trims and joints the two ends of stock fed to it, and automatically applies glue to one end. The operator loads and turns stock as he feeds the unit.

Pick up fingers move stock to transfer rollers that pass it to the assembly machine where the stock is automatically joined and positioned for cut-off to desired lengths.



Feed rate of the assembly machine ranges up to 60 feet per minute, handling stock up to two inches thick and six inches wide.

Onsrud has set up a working unit in its plant where manufacturers are invited to try test production runs, using their own stock. Interested manufacturers can contact Onsrud Machine Works, Inc., Woodworking Machinery division, 7720 Lehigh Avenue, Niles 31, Ill.



Flange Mounted Drive Announced by Falk

Falk Corporation has developed a flange mounted drive that bolts directly to the driven machine and which is designed with bearing capacities for over-hung and thrust loads to allow installation as a geared pillow block, if desired.

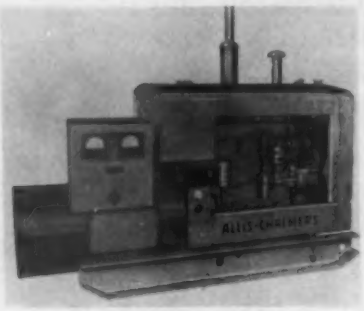
The drives are available for horizontal or vertical application with high speed shaft up or down. They are furnished for application of ½ to 10 horsepower and in double reduction ratios for ½ to 5 horsepower.

●

Hanna Rep Named

Hanna Engineering Works has named E. D. Sweetland Co. as exclusive representative in Seattle, Wash. The firm also represents Hanna in Los Angeles and San Francisco, Calif.

RAIMANN SUPER PATCHER is being marketed by E. V. Prentice Co., Portland, Ore. Henry Becker, technical director of B. Raimann, upper left, shows relative size of unit. Robert Prentice, Prentice general manager, shows conventional unit at right. Inset shows Tom Prentice comparing size of giant patches. Sizes to 6x3-inches will be produced. Standard size dies are interchangeable.



A-C Adds Portable Generator Set

Allis-Chalmers Manufacturing Co. has developed a portable generator set developing 35,000 watts. Called the W-226, it is a complete package will all controls and accessories. It is weatherized, can be used outdoors or indoors.

The switchboard and instrument panel are protected against weather, dirt and tampering by an enclosed cabinet with a glass door that can be locked.

The W-226 is 68 inches long, 26 inches wide and 37 inches high.

●

Rubber Conveyor Belts Utilize Cord Plies

B. F. Goodrich is now producing a new line of "Nycord" rubber conveyor belts made with cord plies. Goodrich says belts made with the cord plies, formerly available only in specially designed installations, are more flexible and have better troughing characteristics than belts with conventional fabrics.

Each cord is completely insulated and imbedded in rubber. Water or acid entering through a cover cut can not wick throughout the carcass.

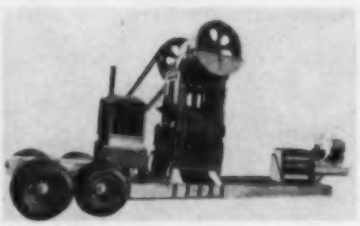
METAL DETECTOR developed by Rader Pneumatics, Inc., Portland, Ore., stops conveyors when any metal passes over detector coils. It will also activate any electrical circuit to stop chippers, sound alarms or flash warning lights. It draws only 250 watts, 110 volts.

Selector Switches Provide Variety of Sequences

Series of compact rotary selector switches capable of switching high currents in an almost unlimited number of sequences have been introduced by Micro Switch, a subdivision of Minneapolis-Honeywell Regulator Co.

Millions of operating sequences are available, since each basic switch is single-pole, double-thrown and has its own operating cam. Assemblies are available with 4, 6, 8, 10, 12, 14, 16, 18 or 20-single-pole, double-throw basic switches units. From 2 to 12 detent position are available.

●



Portable Gang Cuts 35,000 Feet a Shift

A new portable gang by Gunderson Brothers Engineering Corp. is mounted on a semi-trailer 35 feet long and eight feet wide which can move into fringe wood areas or small tracts and cut 35,000 feet in an eight hour shift.

The central mill unit of the portable gang, the Series U, consists of the heavy-duty semi-trailer with I-beam frame on which are permanently mounted the Gunderson gang saw and edger as well as power units, water tanks for water cooled guides on the gang, and two 100-gallon fuel tanks.

The gang and edger are mounted crosswise to the length of the trailer, making possible unusual balance and vibrationless operations. The gang flywheel rotates in the direction of the length of the trailer, eliminating any possible side vibration. Components for the carriage, rolls and edger storage are mounted and carried on a regular 4-wheel, 16-ft. lumber trailer.

Both gang and edger are driven by a GM diesel engine through Twin-Disc fluid couplings using a Poly-V belt to the crankshaft.

●

New Mounting Design

A new lever-actuated manual valve with a foot bracket and section, especially designed for concealed mounting behind or below control panels, is announced by Valvair Corp. The new foot bracket and sections are offered with all Valvair manual valves, in sizes ranging from ¼ through 1 inch NPT.

PERSONALITIES

DAVID T. STAPLES moves up to chairman of the board of directors of Tidewater Oil Co. and is succeeded as president by GEORGE F. GETTY II who has served as vice-president and general manager of the company's eastern division.

EUGENE J. SULLIVAN, who started with Borden as a glue salesman in 1946, is now executive vice-president of the Borden Chemical Co. He has been vice-president in charge of sales since the first of the year.

E. J. SULLIVAN

M. D. PRETORIUS

MAX D. PRETORIUS, formerly of Garrison-Pretorius Corp., Statesville, N. C., has accepted the position of director of sales for Jenkins Machinery and will work out of the home office at Sheboygan Falls, Wis. He has 16 years of experience in machinery manufacture and sales.

HUBERT L. BILLS has been elected executive vice-president for Organizational Planning with Acme Steel Co. He has been with Acme Steel since 1937.

R. M. RONALD

F. A. ROSTEDT

There are two new vice-presidents at Hyster Co.: RAY M. RONALD and FRANK A. ROSTEDT. Ronald, now vice-president in charge of tractor equipment division, has been with the firm 28 years. He most recently was manager of the tractor equipment division. Rostedt, with the firm for 20 years and most recently managing director of the firm's plant in Nijmegen, The Netherlands, will be in charge of all company activities outside the United States and Canada.

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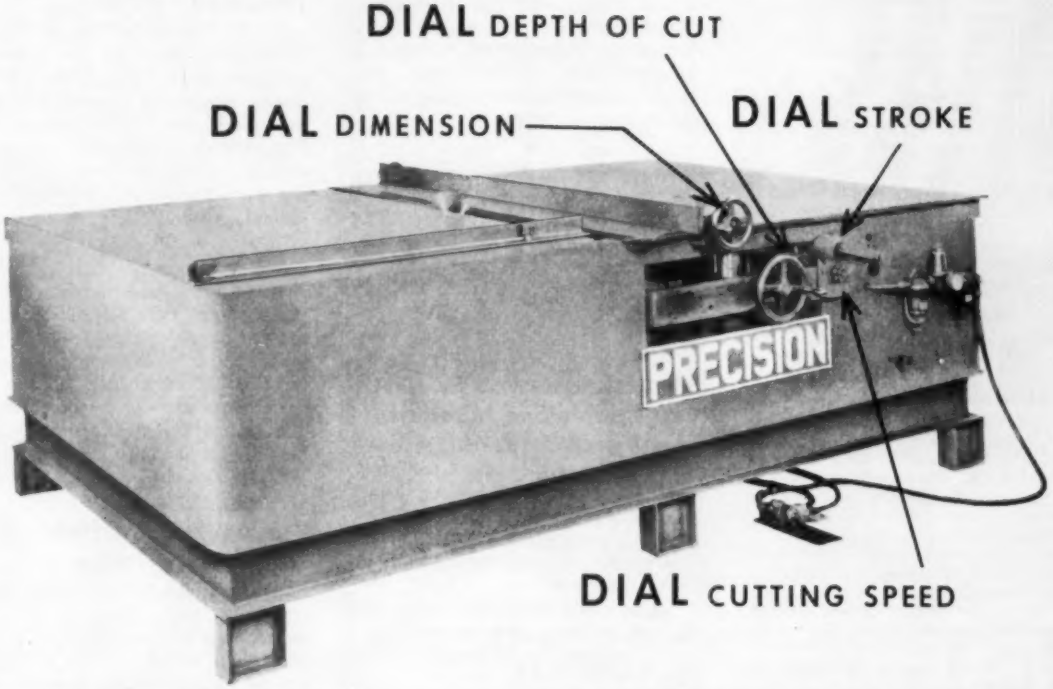

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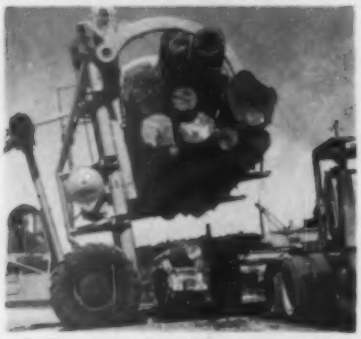

LeTourneau fork lift at Snoqualmie, Wash., operation of Weyerhaeuser Timber Co. has eliminated congestion in unloading logs going to the barker. Previously, if the log deck was full, trucks had to wait, as the only route for logs into the pond is through the barker. Now, if the deck is full, the fork lift unloads logs and places them in a storage area. Between trucks, when logs are needed on the deck, the lift truck moves them from the storage pile to the log deck. The unit can lift up to 50 tons. It was sold to Weyerhaeuser by Totem Equipment Co., Seattle, Wash.

★ ★ ★

Diamond T diesel and trailer hauls 14,220 feet of rough green fir, weighing 52,330 pounds from The Pacific Coast Lumber Co., Scotia, Calif. A feature of this unit is the extensive use of aluminum throughout to increase payload. Aluminum is used as crossarms in the frame, radiator and front and rear hubs, hood, bumper and battery box. Also, cases and both the main and auxiliary transmissions are of cast aluminum. Beams and saddles of the tandem suspension are also aluminum. Gross combination weight rating of the unit is 65,000 pounds for two axle vehicles, 76,000 pounds for six-wheelers.

★ ★ ★

Michigan tractor shovel, equipped with specially designed 11-cubic yard bucket has solved the problem of moving chips for Longview Fiber Co. at Longview, Wash. While the 10-foot wide bucket is rated at 300 cubic feet struck, most loads heap to an average of 500 cubic feet per pass. The Michigan moves over four tons of wet chips on each trip. Cycle time for the 1200-foot round trip haul average 1.86 minutes.

Hyster Tells Improvements To Lift Truck Line

A new series of 15,000 to 20,000-pound capacity lift trucks with many new features has been announced by Hyster Co. Improvements include new features in the engine, power train, steering mechanism, and operator comfort. Also, three engine choices are available to match specific power requirements, including diesel, gasoline and liquid petroleum gas.

Design improvements result in turning radius of 154 to 157 inches and increased speed, 59 to 74 feet per minute.

Engine options include a six cylinder, 111 horsepower (at 2800 rpm) Hercules engine, a Chrysler V8 engine of 135 horsepower (at 2800 rpm) with matching torque converter, and a Perkins six cylinder, 83 horsepower (at 2800 rpm) diesel engine. The Hercules and Chrysler engines can be powered by gasoline or LP-gas.

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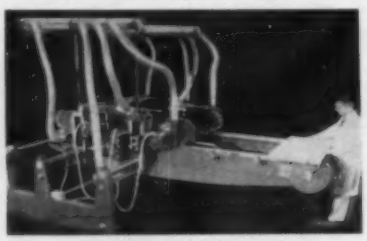


New Double End Machines Announced by Jenkins

A new line of continuous feed double end tenoners, trim saws, panel saws, dado and multiple cut-up machines is announced by the Jenkins Woodworking Machinery division of Kohler-Joa Corp.

The new 140 line is a heavyweight line, mounts up to 10 horsepower motors throughout on 180-degree tilting slides.

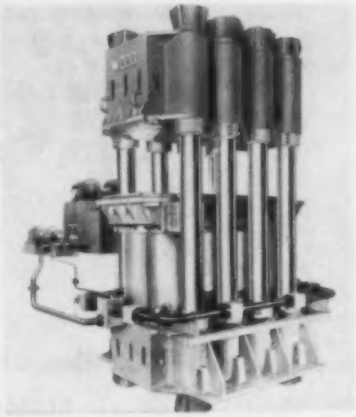
Other features include heavy duty Jenkins piston type Oilomatic or Hi-Speed feed chain, infinitely variable feed speeds, heavy duty holddowns and column traverse.

Stock capacity is five inches minimum to 96 inches plus 8-inch overhang each side, up to 4-inch thick . . . 48, 64, 80 inches, etc. in front of holddowns.

●

New Irvington Wax

Irvington Machine Works is now marketing a lumber wax for use in the Irvington No. 212 hot wax application in the Irvington End-Conditioning system. It will adhere to both green and dry lumber. It has a low melting point which allows relative short melting times and makes it easy to maintain the proper application temperature.



Flat, Corrugated Board Produced by Press

R. D. Wood Co. has developed a combination press for flat and corrugated board that can be used in producing hardboard, composition building board, plywood and pressed wood. Press speeds are: closing at 1.075 inches per second; pressing 0.104 inches per second and return 1.16 inches per second. Operation is manual, semi-automatic or fully automatic.

When the press is used for pressing packs of flat board, the lower half of the corrugated die plate is fastened to the top platen to provide a flat pressing surface. To change for quick pressing or corrugated board, rams are run up and the lower corrugated die platen is fastened to the upper surface of the moving platen.

●

Westinghouse Offers New Motor Design

Westinghouse Electric Corp. has announced a new concept in the design of large a-c motors, called F/A (fully accessible) which permits the enclosure to be manufactured independent of the wound stator. Now, during assembly, the enclosure is merely bolted to the base of the motor making the wound stator fully accessible when required. Previously the enclosure was welded or cast as part of the wound stator.

As a result, the complete line of Westinghouse squirrel-cage, wound rotor, and synchronous motors from 250 to 7000 horsepower for all horizontal utility and industrial drive applications have been redesigned to use only six basic enclosures and 30 frame sizes as compared to the 450 frame sizes formerly used.

Some key advantages of the new arrangement include easy accessibility for thorough inspection, protruding conduit box eliminated, standardization possible.

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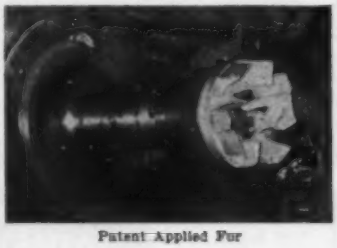

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Mill Equipment, Inc., Seattle
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Klamath Machinery & Locomotive Works, Klamath Falls, Ore.
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Western Steel Foundry Co., Seattle; Portland

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Bellingham Chain & Forge Co., Seattle
Portland Chain Mfg. Co., Portland

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The Enterprise Co., Columbiana, Ohio
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Link-Belt Co., Chicago; Seattle; Portland; San Francisco
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Republic Electric & Development Co., Seattle
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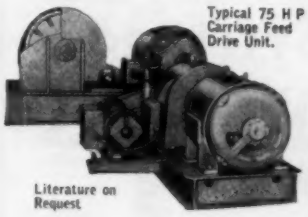
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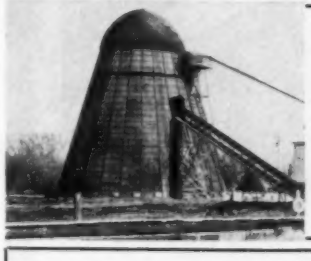

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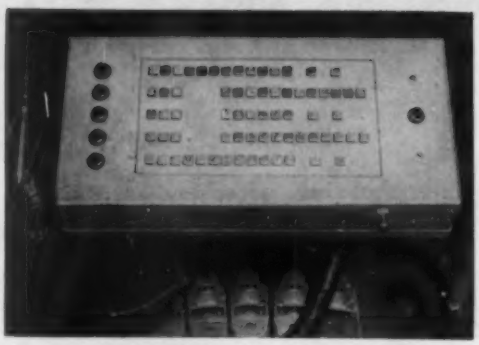

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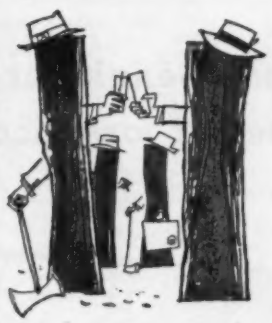

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Ledeen Manufacturing Co., Los Angeles

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Seattle Boiler Works, Seattle
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Scougal Rubber Mfg. Co., Seattle
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R. Hoe & Company, New York City; Seattle; Birmingham, Ala.; Portland
Jones & Orth, Seattle; Memphis
Ohio Knife Company, Seattle; Portland; Oakland; Cincinnati
Pacific Saw & Knife Co., Portland; Los Angeles
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General Machinary Co., Portland
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Irvington Machine Works, Portland
Jeddeloh Bros., Gold Hill, Ore.
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Mill Equipment, Inc., Seattle
Monarch Forge & Machine Works, Portland
National Machinery Sales, Gold Hill, Ore.
Newman Machine Co., Greensboro, N. C.
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Prescott Iron Works, Inc., Portland
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Mater Machine Works, Corvallis, Ore.
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Set-Set Machinery Corp., Calem, Ore.

SHINGLE MILL MACHINERY
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Klamath Machine & Locomotive Works, Klamath Falls, Ore.
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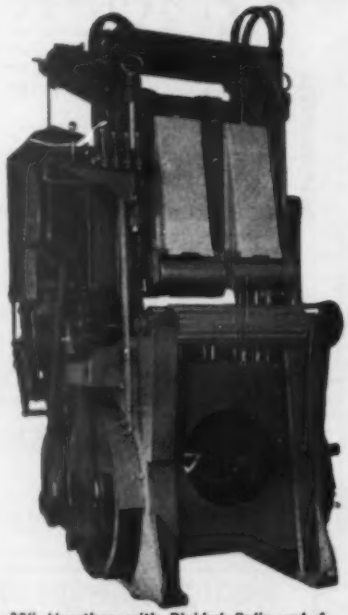

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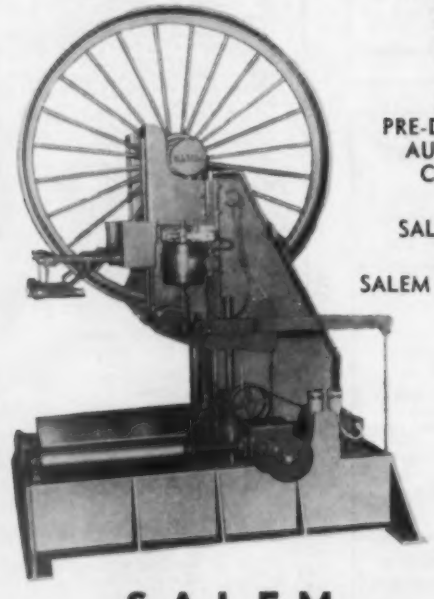

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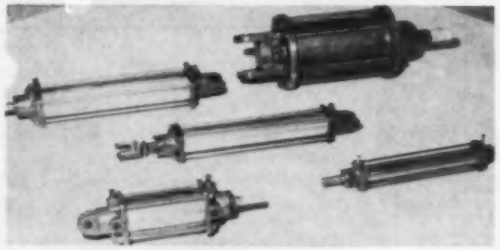

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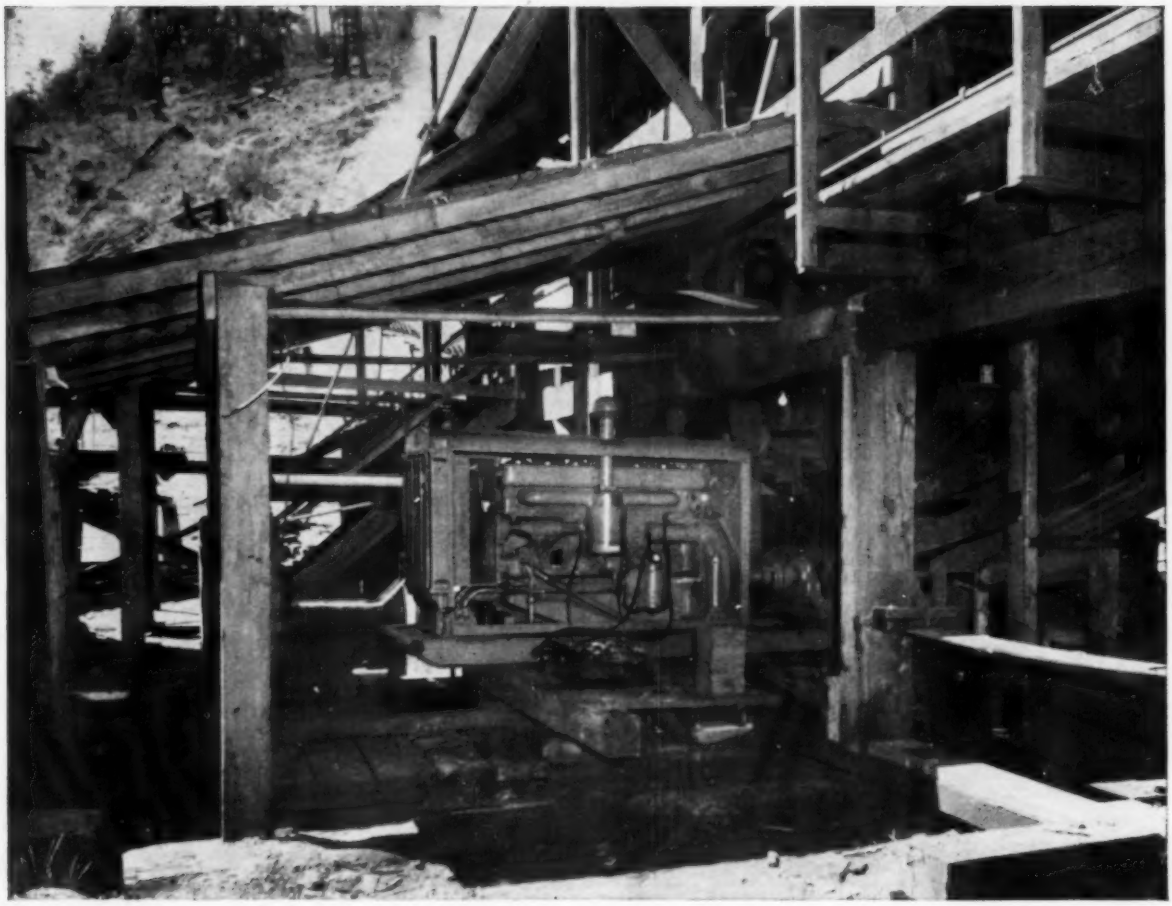

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